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ABSTRACT

Addresses and team reports from an inter-regional seminar which examined aspects of primary health care in China are presented. Background information about the seminar is given along with an introduction to rural health services in China. The report considers four key issues: China's three-level health care network; involvement of the people; health manpower developments; and financing of rural health care. Among the points stressed were China's tremendous commitment to the task of improving the quality of life for its people, especially those in rural areas. Also emphasized was the close association of the health sector with every aspect of economic and social development, and the contribution of concerted action by all sectors to the raising of health standards. Particular notice was taken of the combination of western medicine with Chinese traditional medicine and the step-by-step development of appropriate technology. The involvement of the people, who not only take part in mass health campaigns and the delivery of health care, but also assume responsbility for the management of health activities at every level, is cited as perhaps the most important factor in the development of China's health care system. Major conclusions and general observations from the seminar are also included. (JD)

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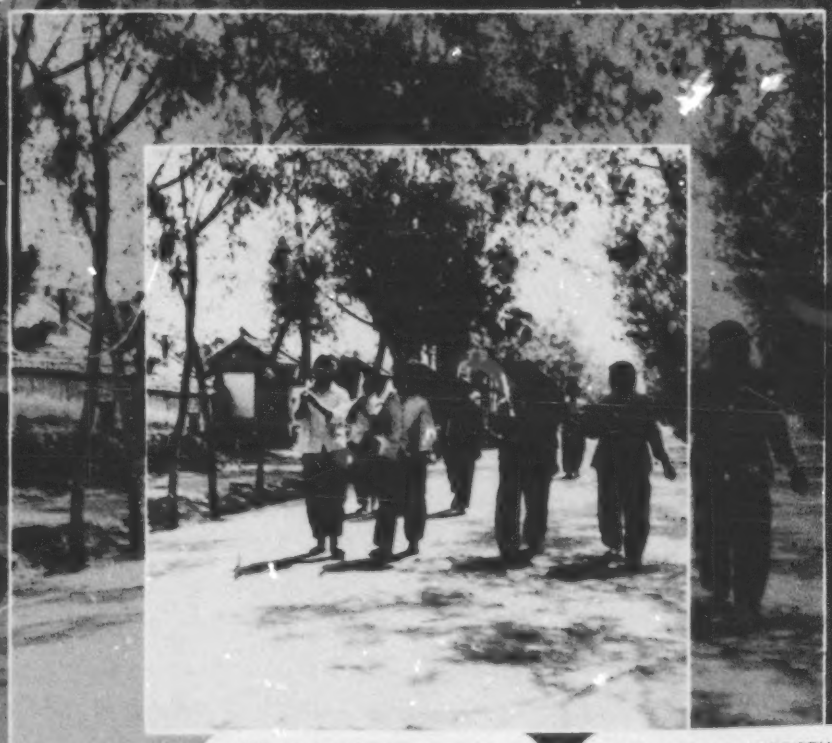
Primary Health Care
The Chinese Experience



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WORLD HEALTH ORGANIZATION
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The World Health Organization is a specialized agency of the United Nations with primary responsibility for international health matters and public health. Through this organization, which was created in 1948, the health professions of some 160 countries exchange their knowledge and experience with the aim of making possible the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life.

By means of direct technical cooperation with its Member States, and by stimulating such cooperation among them, WHO promotes the development of comprehensive health services, the prevention and control of diseases, the improvement of environmental conditions, the development of health manpower, the coordination and development of biomedical and health services research, and the planning and implementation of health programmes.

These broad fields of endeavour encompass a wide variety of activities, such as developing systems of primary health care that reach the whole population of Member countries; promoting the health of mothers and children; combating malnutrition; controlling malaria and other communicable diseases including tuberculosis and leprosy; having achieved the eradication of smallpox, promoting mass immunization campaigns against a number of other preventable diseases; improving mental health; providing safe water supplies; and training health personnel of all categories.

Progress towards better health throughout the world also demands international cooperation in such matters as establishing international standards for biological substances, pesticides and pharmaceuticals; formulating environmental health criteria; recommending international non-proprietary names for drugs; administering the International Health Regulations; revising the International Classification of Diseases, Injuries, and Causes of Death; and collecting and disseminating health statistical information.

Further information on many aspects of WHO's work is presented in the Organization's publications.

Primary Health Care—
The Chinese Experience

Report of an Inter-regional Seminar

WORLD HEALTH ORGANIZATION, GENEVA 1983

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INTER-REGIONAL SEMINAR ON PRIMARY HEALTH CARE

Yexian County, Shandong Province, China, 13–16 June 1982

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Objectives and Design of the Seminar

An Inter-regional Seminar on Primary Health Care took place in China, from 13 to 26 June 1982. Jointly organized and financed by UNDP, UNICEF, the World Bank, and WHO, with the support of the Ministry of Public Health of the People's Republic, it was held at the WHO Collaborating Centre for Primary Health Care in Yexian County, Shandong Province.

Objectives

The objectives of the seminar were:

(*a*) to explore some aspects of experience in primary health care in China, with particular attention to:

— the three-level network of the health care system
— the people's involvement in, and management of, health care
— health manpower development
— financing of health care;

(*b*) to draw conclusions applicable to the development of primary health care in other countries.

Design of the Seminar

The seminar was attended by top-level national decision-makers, i.e., ministers, presidential advisers, and senior health administrators from 15 countries. The 27 participants are listed at the beginning of this report: it is they who should be regarded as the co-authors of this report.

The seminar was divided into two distinct phases, each lasting one week (for schedule, see Fig. 1). During the *first phase*, in which only the senior health administrators took part, the participants were divided into four teams, each dealing with one of the four issues chosen for examination by the seminar. Extensive field work was carried out in selected services and locations at the county, commune, and production brigade levels.

SEMINAR SCHEDULE—1st WEEK

	13 June SUNDAY	14 June MONDAY	15 June TUESDAY	16 June WEDNESDAY	17 June THURSDAY	18 June FRIDAY	19 June SATURDAY	20 June SUNDAY
MORNING		[illegible]	Field Work	[illegible]	Field Work	[illegible]	[illegible]	FIELD EXCURSION
AFTERNOON	ARRIVAL IN YEXIAN	Field Work	Field Work	Field Work	Field Work	Field excursion	OPEN	
EVENING	Official Dinner given by Provincial and County authorities	Team discussions, drafting of Team papers →						

[illegible] Plenary Session

SEMINAR SCHEDULE—2nd WEEK

	21 June MONDAY	22 June TUESDAY	23 June WEDNESDAY	24 June THURSDAY	25 June FRIDAY	26 June SATURDAY
MORNING		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AFTERNOON	ARRIVAL OF MINISTERS IN YEXIAN	Field Visit	Field Visit	Field Visit	Field Visit	
EVENING	Official Dinner given by Provincial and County authorities			Official Dinner given by WHO/WPRO Regional Director	Official Dinner given by the Minister of Health of The People's Republic of China Departure for Beijing	

[illegible] Plenary Session

Fig. 1. Schedule of the Seminar

初级卫生保健区间讨论会
INTER-REGIONAL SEMINAR ON PRIMARY HEALTH CARE
YEXIAN COUNTY SHANDONG PROVINCE
PEOPLE'S REPUBLIC OF CHINA 1982.6.22

Group photo of participants

At the end of the first week, each of the four teams prepared a working paper on the issue assigned to it. These papers provided a basis for the second week's work and furnished the material for Chapter 3 of this report.

During the *second phase*, ministers and presidential advisers joined the seminar. Together with the senior health administrators, they studied each of the issues developed during the first week. On the basis of this study, which included further field visits and discussions, general conclusions were drawn. These are to be found in Chapter 4.

The conduct of the seminar was greatly facilitated by the distribution to participants of detailed information sheets on the places and services to be visited and discussed. These documents, which are reproduced in the Annex, enabled participants to engage in field work without undue delay for briefing.

Opening Addresses

Message from Dr H. Mahler, Director-General of WHO

At this very important primary health care seminar, I know there are very high-class technicians present, but I also know, which is very important, that the policy-makers, the honourable ministers from the planning sector and from the more discrete sector of health are here also. And I think this is a very important opportunity for everybody to take stock of where we really are in regard to primary health care. As Director-General of WHO, I fully realize that health is not the only thing, but that everything else, without health, is nothing. And I think that it is very important to realize this when we look at development at large. Whenever the health component is forgotten, you forget at the same time the vital factor in development, namely the human being, his creative energy, his physical energy. It is for that reason that it has taken so many years, and very painful years at that, for WHO to arrive at the policies embodied in primary health care. One day the history will be written, and you will see the blood, sweat, and tears it took in order to arrive at these revolutionary policies. Therefore we have to do everything possible to make sure that today's primary health care dogmas do not become tomorrow's doubts. This is the main reason for getting all of you here to China to debate some of the key issues involved in the way we look at primary health care today.

Let me take you straight into one of the key issues: *involvement of the people*. To draw a parallel, let me say that, in participating in this primary health care seminar, you are not only participating in its execution but you must also identify yourselves with its management, for if you identify only with its execution you may not get the best results. The same thing applies to involvement of the people in primary health care. If they are simply involved in the delivery of health care, without being actively involved in and identified with the management of primary health care, I can assure you that you are not getting the primary health care doctrine of participation of the people properly through.

Now, let us move on from this—people's involvement at large—to a more specific kind of involvement, that of a very vulnerable group of people, namely *health manpower*. Here again, I think we have to realize that we are

not just looking at a kind of peripheral auxiliary called a barefoot doctor here in China, or some other name such as village health worker or agent in other countries. We must be sure that we are looking at the total continuum of health manpower from the periphery up to the most sophisticated level and understand how to create internal dynamic cohesion at all levels. I am convinced that if we do not understand how to go about the continuous training and upgrading of all levels of health manpower and how they relate to the larger concept I just mentioned, that of people's participation—if we do not succeed in that, again I am sure that it is precisely today's doctrines in primary health care that will be our doubts tomorrow, whether we did or did not do it properly.

A third key issue that, for me at least, is of vital significance to the success or failure of primary health care is that we should have an intimate understanding of the *financial aspects*, that we should not close our eyes to realities, to the fact that we shall not get primary health care, or primary health care as a contributory factor to health for all, without proper financing. I am sure that this is an absolutely vital issue for everybody to come to grips with in this seminar.

If you have the courage to face up to these issues, I think your conclusions will be of great significance to all the participants when they go back home, and to all the organizations involved.

Now, I have been given to understand that this seminar has been organized in what I believe is a rather ingenious way: that the senior health administrators are going to take a look into concrete, real life experience here in China during the first week, that they will observe, reflect, and digest, and that they will then produce position papers on the key issues I mentioned a moment ago. Thus, in the second week, when they join the other participants, the honourable ministers of planning, health, or whatever their titles may be, they will be truly ready, with concrete examples, to debate the three key issues I have just mentioned.

I would like on this occasion to express my profound personal gratitude and that of WHO to the Ministry of Public Health for having made it possible to organize this seminar jointly with UNDP, UNICEF, the World Bank and, of course, the World Health Organization.

When I and others receive the report of the seminar, I am sure that we shall all agree that it was yet another important milestone along our way not only to understanding primary health care and its concepts, dogmas, and doctrines, but also to getting all the courage needed to get on with the action, the *implementation* that has to follow this understanding, so that we can truly move towards the countdown for "health for all by the year 2000". It will be a great pleasure for all of us to make sure that your report will have a truly worldwide distribution so that other people will be able to benefit from your very exclusive experience at this primary health care seminar in China.

Address by Mr James P. Grant, Executive Director of UNICEF

My remarks will focus on some of the lessons that may be drawn from experience of primary health care in China. But, before going into this subject, allow me to take a minute to sketch out the international context and the reasons why we are assembled here this month. It was just about 10 years ago that WHO and UNICEF, through the mechanism of our Joint Committee on Health Policy (which comprises members of the respective Executive Boards of both organizations), reached the conclusion that the conventional health systems, which we were then supporting in most developing countries, were failing to meet the health needs of the majority of their populations and would not permit the attainment of the goal of "health for all by the year 2000". These systems were usually in touch with a very limited proportion of the population, often concentrated in cities, and were having little impact on the health of the population at large. We therefore had to ask ourselves whether there was not a more effective way of promoting health for all. Looking around the world, we found some exciting examples of another approach which seemed to be working well, an approach which started by mobilizing community action and by bringing into play many forces outside the conventional health system, like nutrition, water supply and sanitation, education, and communications. Most of the examples we found were on a relatively small scale, but in one country, China, where more than one-fifth of the world's population was living, there was a nationwide system based on this approach. None of these examples could be ignored. And so, in 1978, there came about the International Conference on Primary Health Care at Alma-Ata, which endorsed this basically new approach. Since then, primary health care has become widely accepted as the way to achieve "health for all", with the further endorsement of the World Health Assembly and the United Nations General Assembly. It is with good reason, therefore, that we are here to take a close look at experience in this field in China.

It is worth stressing at the outset that, in the late 1940s, hard as it may be to believe for those of us in Yexian today, China was among the least developed countries in both economic and health terms. Malnutrition, diarrhoea, and infectious and parasitic diseases were rampant. Modern health services were largely confined to a minority in the cities. The population was largely illiterate. Infant mortality was nearly 200 per 1000 births, the death rate was approximately 25 per 1000, and the crude birth rate was in the high thirties.

In approximately 30 years, all this has been changed dramatically. *Per capita* income has improved substantially, having more than doubled in real terms through economic development. More important, health conditions have improved spectacularly. The infant mortality, death, and birth rates today are well under one-third of the level of earlier years with a *per capita* income level in real terms that is still no more than that of the industrial countries of Europe and North America two centuries ago. Life expectancy in China, which has doubled, now equals that in the industrialized countries

round about the year 1950, and in sizeable parts of China it equals that of the industrial countries today with their vastly higher *per capita* incomes.

To express it differently, if China today had the health situation of the average low-income developing country—say, one with a *per capita* income of under $400—life expectancy would average 15 years less, approximately 4 million more babies would be dying each year, and 27 million more babies would be born each year. Conversely, if the other low-income countries, with a total population of 1.2 billion, had achieved the health conditions that China has achieved, 4 million fewer babies under 1 year would die, and 30 million fewer births would take place each year. What are some of the principal factors that brought about this remarkable change?

I should like to suggest that the first factor was a change in the direction and dynamics of the government and the people, a change which manifested itself in the confidence that age-old problems of poverty, starvation, illiteracy, and ill-health could be resolved; and that the responsibility of organized society was to bring the good life to *all* its people, with particular attention to the vast and neglected rural population. In the vocabulary that has grown up around the primary health care movement, this change of spirit has come to be called "national political will", a serious commitment at the highest level in government to the social goal of health for all. This will has been evident in China since the early 1950s.

A second principal factor was the early recognition that the use made of medical knowledge and the efficiency of health protection depends largely upon social organization. This was explicitly recognized by WHO and UNICEF in 1978 when they concluded that "health for all by the year 2000" could only be achieved through the adoption by countries of the primary health care approach. China started using this approach in the 1950s, in its mass health campaigns, and has been refining its social organization ever since, introducing the present three-tier health system approach with barefoot doctors on a mass scale in the late 1960s and early 1970s.

Important as the introduction of a cost-effective health system has been for health improvement, a vertical medical system cannot be truly effective, or even stand by itself, unless it is integrated with other activities in a joint attack upon the problems of development and social reconstruction. Four major factors contribute to health, the first being sufficient increases in income and its equitable distribution to permit minimally adequate clothing, shelter and, most important, food. We have seen that around us in Yexian.

Secondly, there must be prices that those in need can afford, if the availability of essential foods and access to them are to be ensured. This is done in China through its rationing system for grains, which it probably takes more than 1% of the GNP to subsidize, as well as through tremendous efforts to increase food production so as to ensure adequate supplies.

Thirdly, there is the expansion of literacy and education and such basic services as water supply and transport. The tremendous expansion of literacy and virtually universal primary education may have contributed almost as much to improved health in China as any other factor.

Fourthly, there must be the development of an effective health care

system, based on primary health care principles, with the essential ingredient of widespread participation by the people.

If all four of these conditions are met, as has occurred to a large extent in China over three decades of trial and error, dramatic benefits ensue. The spectacular improvement in the health of the Chinese people is thus the result not only of the dynamic and imaginative approach adopted by the Ministry of Public Health but also of convergent and synergistic efforts by many other sectors, all within the cooperative structure of Chinese society.

It is worth remembering that in China health is not simply a "sector" but an explicit goal to be achieved through all sectors.

While China is an outstanding example, other low-income developing countries have, of course, also made notable achievements in health over the past two to three decades. Some of these have been in areas within countries, geographical regions, states, or districts. Kerala State in India is an oft-quoted example. With a lower-than-average income for India, it has achieved health statistics that are rather better than average: an infant mortality rate of well under 50 per 1000 live births, and a life expectancy well into the sixties in terms of years.

Sri Lanka, with its population of 15 million and a *per capita* income probably below that of China, offers the example of a relatively small country that has achieved health conditions equal to or even better than the average for China.

I noted earlier that, if all four key factors, including a primary health care system, are present, dramatic benefits ensue. No two countries—and indeed no two regions in a country such as China—will achieve the same combination or rate of progress with the four factors.

Many other countries in the process of establishing the infrastructure for primary health care have strengthened their political will in this respect and are engaged in the reorientation of their health care delivery systems, including the retraining of health workers. Many countries are mobilizing communities, improving managerial processes and building up machinery for intersectoral collaboration to achieve health objectives. Indeed, this seminar provides an opportunity for countries to share experience, thus contributing to each other's understanding of primary health care and showing how effectively we can learn from each other—not just from China, but from all the countries represented here.

The enthusiasm with which I speak of China's accomplishments in health is enhanced by a personal factor. Two generations of the Grant family gave much of their lives to the advancement of health in China: my grandfather as a medical missionary of the old school, and my father as an enlightened public health physician. In his continuing exploration of the major factors affecting health in this country, my father came to realize that social and economic equity, an enlightened agricultural and industrial policy, and universal education are just as important for the attainment of health as is an efficient health network. My father was also keenly aware of the stimulating and enriching role that could be played by a cooperating international organization and therefore made an important contribution to the

introduction of the League of Nations health programme into China. But international war and internal upheaval seemed to frustrate his early visions. It is my great good fortune now to see that, through the heroic efforts of the Chinese people, his dreams—and those of his own father—are coming true.

1. Background to the Seminar*

The Subject

At the Thirtieth World Health Assembly in 1977, the vast majority of the world's countries—both developing and industrialized, and irrespective of their ideological orientation or their political or economic system—decided unanimously that the main social target of their governments and people and of international organizations in the coming decades should be "the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life".[1] In the same way all 134 countries represented at the International Conference on Primary Health Care, held in Alma-Ata, USSR, in 1978 accepted the primary health care approach as the key to attaining this target, as part of their own socioeconomic development and in the spirit of social justice.[2] Behind the concepts of "health for all" and "primary health care," there is a clear and unequivocal doctrine with practical implications that should not be forgotten, especially when these concepts have to be translated into concrete policies, strategies, plans, programmes, and activities in actual country situations.

Of the components of this health doctrine, four appear to be particularly important. These may be broadly stated as follows:

(1) to provide all people with access to all levels of the health care system, reducing the existing gross inequalities in health status both within countries and between developed and developing countries;

(2) to give people the right and duty to participate individually and collectively in the planning and implementation of their own health care, thereby making primary health care an integral part of community and national development (hence the need for practical and effective approaches to multisectoral action in tackling health problems);

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* Based on the briefing given to the participants in the seminar by Dr D. Tejada-de-Rivero, Assistant Director-General of WHO.

[1] *Handbook of resolutions and decisions of the World Health Assembly and the Executive Board*, 5th ed., vol. II. Geneva, World Health Organization, 1983, p. 1 (resolution WHA30.43).

[2] *Alma-Ata 1978. Primary health care*. Geneva, World Health Organization, 1978, p. 3 ("Health for All" Series, No. 1).

(3) to face health problems in such a way as to take full account of the particular social, cultural, economic, and political conditions in each country, which implies the development of technological approaches that are scientifically sound, technically effective, and socially relevant and acceptable, and that countries and local communities can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination;

(4) to make the best possible use of all available resources—manpower, financial, technological, etc.—through a well planned process of progressive but effective reallocation of those resources that will permit countries to reduce inequalities in health status and in accessibility to health care as soon as possible.

This health doctrine did not arise spontaneously as a simple product of the intellect or of goodwill and faith. It is the consequence of a process of careful analysis of the real causes of the past and present health problems facing all countries of the world and, most important, of a review and consolidation of past and present experience in countries that have tried to solve those problems.

Thus, the real challenge of today for those who fight in the difficult area of health is no longer to develop a health doctrine or to devise a sound approach for tackling health problems. There is a unanimous worldwide consensus in this respect. The doctrine and approach are there and the real challenge now is how to put them into proper, full-scale practice in actual country situations, not just in isolated pilot projects but on a countrywide basis, through a sustained and irreversible process, despite the current economic crisis. Thus the subject of the Seminar could not be other than primary health care.

Though the decision of governments in favour of primary health care has been unanimous its implementation is proving difficult in many countries and it appears that certain critical issues of primary health care have not always been well understood. Of the many factors contributing to this dilemma, two deserve special mention:

(1) Countries are not starting from "square one." Many have a long tradition in the development of health care systems. Most of them have already had different types of experience relating to primary health care but very few have taken into account the comprehensive and integrated perspective in which such care is viewed today, and very few have developed it on a real countrywide basis. In many instances their past experience is an advantage, but in others it can well present a serious impediment to the full and proper implementation of primary health care.

(2) In the process of implementing primary health care, many misconceptions can occur, resulting in the negation of the health doctrine that lies behind the primary health approach and the target of "health for all". Here one can point to examples relating precisely to the four issues explored in the Seminar.

— In many countries, primary health care is being developed as a vertical programme in parallel with, and independently of, the rest of the health service system. This misconception leads in some cases to the consolidation of a second- or third-rate type of health care for the poor,

and in rural areas, and is therefore a denial of the very principles of primary health care. The primary health care approach applies to all levels of the health service system. Only in this way will people have access to all those levels.

— In many countries primary health care is provided in a traditional and paternalistic way whereby health workers detached from the communities they are supposed to serve offer people health care without their full participation. In primary health care the people's involvement is essential. They must be involved in the identification of health problems to be dealt with and in the management and supervision of health services, and they must play an active part in the delivery of services and take responsibility for their own health at the family level and individually.

— In many countries, primary health care is being reduced to a matter of community health workers working in isolation, and overall health manpower development is likewise being reduced to the "one-off" training of such workers. If primary health care means access for everybody to all levels of the health system and if it means the participation of the people, then it is of paramount importance to train all types of health manpower from the most sophisticated specialists to individual family-members.

— In many countries, the implementation of primary health care is held up pending the availability of external financial resources. While such resources can make it possible to get things moving and start on some critical activities, they cannot constitute the only source of finance for implementing primary health care. The changes throughout the health system implied in the primary health care approach will require a redefinition and reorientation of the systems for financing health care and a reallocation of national financial resources within the health service system.

It is these difficulties that led the Director-General of WHO to indicate in his message to the seminar (for full text, see pages 7–8) that it is time to "take stock of where we really are in regard to primary health care" in order to understand the critical issues under discussion and muster the necessary courage "to get on with . . . the action that has to follow this understanding".

The Place

The recognition of China's accomplishments in health is by no means new. For years now, the world has been aware of what has been achieved there in the most difficult conditions: a very large country with a relatively underdeveloped economic infrastructure, a population of about 1000 million (more than four-fifths of whom live in rural areas), and a low *per capita* income. In spite of these difficulties China has managed to establish a three-level network that is a realistic and practical example of the primary health care approach, providing accessibility to all levels of care. This, combined with the participation of the people in Patriotic Health Campaigns, local financing of health care, and active support of "barefoot doctors" and

volunteer health workers, has already made the achievement of "health for all" in China more than a mere possibility.

However, it is only of late that the significance of this achievement for other countries has been really appreciated. Although the Chinese system cannot and should not be transplanted to other countries because of very different historical, social, cultural, economic, and political backgrounds and circumstances, highly important and relevant lessons can be drawn from it (see address by the Executive Director of UNICEF on pages 9–12). These may very well make a valuable contribution to the better implementation of primary health care in all countries of the world. In fact, experience in China has already played a significant role in the consolidation of the underlying health doctrine.

In October 1978 a Memorandum between WHO and China governing technical cooperation in health activities was signed by Dr H. Mahler, as Director-General of WHO, and Dr Chiang Yichen, then Minister of Public Health of the People's Republic of China. This instrument expressed the common desire of both parties to strengthen and develop their technical cooperation in medical and scientific research and health work with a view to promoting the WHO target of "health for all by the year 2000" and China's objective of accomplishing the modernization of medical sciences within the country. The signatories also recognized the value of such cooperation for the benefit of China, WHO, and its other Member States, particularly the developing countries.

The Memorandum launched a vast series of cooperative activities between China and WHO. Since then, other sources of technical cooperation have entered the field such as UNDP, UNICEF, the World Bank, and several bilateral agencies, all interested in the health or allied sectors.

Among the developments jointly promoted by WHO and China has been the establishment of what are known as Collaborating Centres for Primary Health Care. The first three were at Jiading near Shanghai, Conghua in Kwangtung Province, and Yexian County in Shandong Province. These centres constitute an active creative network and together have generated a remarkable volume of health work, health services research, and training (both for Chinese workers and international participants), as well as in-depth analysis of the Chinese experience with its valuable refinement of what is generally recognized as the actual practice of primary health care. WHO has used these centres, and these centres have used WHO. It is also of interest that China considers the county-level health services to be a crucial element in its overall system and for some time has been designing a scheme for the strengthening of health care in 40 model counties—of which Yexian is, of course, one. It is now negotiating a possible loan from the World Bank to accelerate this "model county" work and the strengthening of medical education. UNDP and UNICEF are also closely associated with the "model" scheme which, in due course, is intended to spread step-by-step to groups of other counties until health care has been upgraded in *all* counties in China.

In this perspective Yexian has a special significance and this is one reason, among many others, why it was decided to hold the seminar there.

2. An Introduction to Rural Health Services in China*

The health services in China, with their goals of promoting mental and physical health for all Chinese nationalities and of raising the level of health of all the people, form an important component of the country's socialist construction. As 80% of the population live in the rural areas, rural health services have consistently been the focal point of such work. In the 32 years since the founding of the People's Republic, emphasis has been laid on the four aspects discussed below.

1. *A comprehensive approach to the training of health personnel for rural areas*

The health services left over from old China were very backward. In 1949, there were only 505 000 professional health workers for a country with a population of over 500 million, and most of them were concentrated in the few large cities and coastal areas, leaving the vast countryside with a dire shortage of doctors and medical support. To remedy this and to develop the rural health services, the training of health personnel was—and still is—of crucial importance. This was approached in the three following ways.

(*a*) Through energetic efforts to develop medical education, it has been possible to provide the rural areas with middle- and top-level medical personnel. As of 1981, there were 112 medical colleges from which a total of 415 000 students had graduated since 1949; further, there were 556 secondary medical schools which had witnessed the graduation of a total of 948 000 students. The majority of professional health workers in rural areas were trained after the establishment of the People's Republic.

(*b*) Emphasis was placed on training local personnel, teaching what can be put into immediate use, conducting crash courses, and providing refresher training, as a result of which large numbers of selected health activists, herbal doctors, and peasants with a certain level of education acted part-time as peasants and part-time as health workers; later these became "barefoot

* Based on an address to the Seminar by Dr Cui Yueli, Minister of Public Health of the People's Republic of China.

doctors". By 1981, a total of 1 396 000 barefoot doctors and 2 591 000 health aides and birth attendants had been reached.

(*c*) Urban medical personnel were organized into mobile medical teams to provide services to the peasants in the rural areas, as well as to train local health personnel and promote disease control.

Barefoot doctors have played a cardinal role in promoting health work. Though their technical level may not be high, the training of these rural health workers does not need to follow any set pattern; this makes it possible to solve the problem of inadequate manpower in a relatively short time. As local people, they work and live in the community itself, maintaining intimate ties with the masses; furthermore, their modest remuneration is such that the community can afford them, retain them, and enjoy easy access to their services.

To upgrade the competence of the barefoot doctors, special attention to their training programme is required. After initial training, planned follow-up and booster courses are necessary. The main responsibilities for this training lie with the Commune Health Centre and the county "middle" medical school while other county-level health institutions play a significant role. While the training programme includes ideological and professional education, enabling the barefoot doctors to acquire professional expertise and technical ability, it also—and above all—fosters the idea of serving the people and being responsible to the people. Unified training manuals have been prepared for the whole country, embracing knowledge of preventive medicine and clinical medicine and both western and traditional Chinese medicine. Traditional Chinese medicine and pharmacology, with their unique theory and therapeutic procedures, constitute a compendium of practical experience gained over thousands of years by the Chinese people in their fight against disease; there is a deep attachment to them among the people of the rural areas, which are rich in medicinal herbs. Traditional Chinese medicine and pharmacology help to reduce medical costs and alleviate the burden on the community. Through daily practice and follow-up training, a considerable number of barefoot doctors now have at their disposal a solid fund of practical experience, together with a relatively broad knowledge of basic medicine which enables them to discharge their responsibilities at the level of primary health care. A good proportion of these barefoot doctors have attained the level of "middle" medical school graduates and have been awarded the rural doctor's certificate on successfully passing their qualification examination. Rural doctors still belong to the barefoot doctor category and continue to work at the production brigade level. The remuneration of barefoot doctors comes from three sources:

(*a*) from the brigade in the form of work points, or from commune or brigade income accruing from special enterprises and sidelines, or from their welfare funds;

(*b*) from the fees charged for services by the Brigade Health Station;[1]

[1] An abbreviation of the full title, which is "Brigade Cooperative Medical Health Station".

(*c*) from the Government in the form of subsidies.

It is considered essential to ensure financial security for the barefoot doctors by paying them at a reasonable rate. With a work force such as this in rural areas, the health services have achieved a broad coverage and it is possible, for a start, to prevent, control and treat diseases at grassroots level, thus effectively protecting the health of the country's peasants.

2. *The establishment and improvement of a three-level rural medical and health network*

Over the thirty-odd years since 1949, China has made a strenuous effort to establish, step-by-step, medical and health institutions at the county, commune, and brigade levels. These form a three-level network with the county-level medical and health institutions playing a central role and acting in coordination with the Commune Health Centre and the Brigade Health Station.

The county-level health institutions serve as centres providing technical guidance on disease prevention, medical care, and family planning, as well as facilities for health personnel training for the whole county. As a general rule these institutions comprise a county hospital, an epidemic prevention station, a maternal and child health centre and a "middle" medical school; in many counties there are also hospitals dedicated to traditional Chinese medicine, drug control laboratories, and other specialized health institutions. The 2317 counties in China have a total of 2829 county hospitals, 362 000 beds, 2088 county epidemic prevention stations, 1888 county maternal and child health centres, 1285 county "middle" medical schools, 819 county drug control laboratories, and many other health units affiliated to industry and other sectors. Some 427 000 health professionals work in China's health institutions at the county level; the majority of these workers were trained in, and graduated from, medical colleges or "middle" medical schools during the period following the liberation in 1949.

The Commune Health Centre is an integrated health institution at the grassroots level of rural health. There are over 55 500 Commune Health Centres in China responsible for local health administration, routine activities connected with disease prevention, medical care, and family planning, and they provide technical guidance and training for the personnel manning the Brigade Health Stations. Commune Health Centres, which are centrally located, enjoy good communications, and command better expertise and equipment and are designated as Major Health Centres. Priority is given to the Major Health Centres in the overall improvement of China's health services to enable them to lend support to the ordinary health centres by accepting referrals and attending to problems that are beyond the latter's technical capabilities; in this way facilities can be provided for people to have access to a comparatively high level of health care in their own vicinity. On the average, each county has 5.2 Major Health Centres. As for the number of health professionals working in the Commune Health Centres, this is calculated at around 925 000.

The Brigade Health Station constitutes the lowest level of health organization in the rural areas, and there are 610 000 such stations in China at the moment. They participate in all aspects of health work, including mobilization of the masses for Patriotic Health Campaigns, provision of technical guidance in water quality control and environmental sanitation, planned immunization, the control of communicable diseases, the prevention and treatment of locally prevalent parasitic and endemic diseases, the dissemination of health education, family planning, supervision of maternal and child health care, and the cultivation, collection, processing, and utilization of medicinal herbs.

3. *Development of rural health services through the joint efforts of the State, the collectivity, and the individual, using multisectoral collaboration*

China is a country of vast dimensions and a huge population, and its economy has yet to be further developed. In promoting rural health services for the 800 million peasants, the authorities have in the main depended upon the self-reliance of the masses to make up for the paucity of funds. The Government accords primordial importance to the development of the rural health services, and the allocation of funds for this purpose is increasing year by year. However, the State alone could not possibly afford to finance all health activities at the present time, and indeed, in the opinion of the Chinese authorities it is by no means an ideal approach. Advantage has therefore been taken of the conjugation of the State, the collectivity, and the individual to maximize multisectoral collaboration, to exploit national and local resources to the full, to introduce appropriate technology suitable to the rural areas, and to utilize the limited funds to the greatest possible extent for the development of the rural health services, without losing sight of local conditions.

The majority of the county-level health institutions are run by the Government, which provides for capital construction, supplies, equipment, staff salaries, and operating expenses; a small number of institutions, such as some of the county hospitals offering traditional Chinese medicine, are run by the community. Among the Commune Health Centres, only one-third are Government-financed, the remaining two-thirds being funded by the communities themselves with the Government providing a certain measure of subsidy. The Brigade Health Stations are managed with funds from the community. The Government provides subsidies for immunization services, personnel training, and procurement of medical equipment. In addition, general surveys (with follow-up treatment) in respect of schistosomiasis, leprosy, malaria, endemic goitre, and gynaecological disorders such as prolapse of the uterus and urethral fistula are conducted free of charge with Government funding.

To ensure that health services are accessible to the peasants, a cooperative system of medical care functions in the rural areas. This is based on collective welfare and run on a voluntary basis through collective participation. The charges for medical services to be paid by individual members are

determined by the community itself by discussion, taking into account the relative wealth of the community in question.

Under Government leadership, the rural health service receives guidance and support from the health administration and benefits from the collaboration of other sectors. This creates the material conditions necessary to ensure the success of primary health care and the promotion and development of the rural health services throughout the country.

4. *Broad mobilization of the masses to ensure their involvement in, and management of, rural health services*

The functioning of the rural health services depends on the people themselves and directly affects China's 800 million peasants at times of birth, sickness, old age, and death. Only by relying on the masses and by integrating the will of the Government with the wisdom and initiative of the masses can progress be made. It follows that the community must mobilize itself to participate in everything pertaining to the rural health services. The community is directly involved not only in discussing and deciding upon major issues, such as the selection of candidate barefoot doctors, the establishment of Brigade Health Stations, the functioning of the cooperative medical services, fund-raising, and expenditure, but also in the supervision and monitoring of work plans and their execution and in handling the financial side. Furthermore, programmes of rural construction and environmental transformation have to be discussed in detail by the people and implemented for the most part through their efforts.

The Chinese Government has always attached importance to community involvement in health work. In the fifties, Comrades Mao Zedong and Zhou Enlai, drawing upon experience gained during the revolutionary wars, posited the principle that health work must be integrated with mass movements and called into being patriotic health campaigns aimed at the elimination of pests and disease. More recently, the Government has advocated cultural development and the simultaneous building up of material civilization. Activities have been promoted on a national scale in connexion with "The Five Stresses and the Four Points of Beauty" (i.e., stress on decorum, manners, hygiene, discipline, and morals; beautification of the mind, language, behaviour, and the natural environment), and a "Civic Virtues Month" has been institutionalized. An important feature of these activities is the mobilization of the masses to foster cleanliness, hygiene, and the beautification of the environment. Therefore, health is henceforward closely allied to cultural development and to the promotion of various services, major issues of common concern to the entire Chinese people.

The approaches cited above reflect the guiding ideology and basic experience gained in the development of rural health services, namely, invariably to take as a starting-point the interests of the people and the actual conditions that prevail in China; to adhere to the principle of "prevention first"; to have faith in the masses and rely on their wisdom and strength; to

practise self-reliance, hard work, and thrift; to start with popularization and then move on to improvement, followed in their turn by further popularization and further improvement. That these approaches are well suited to China's specific conditions and its rate of economic growth is borne out by the fact that the rural health services have developed rapidly at a cost that the State, the community, and the people can really afford. A comparison between 1949 and 1981 shows that the number of rural hospital beds has increased over sixtyfold (from 20 000 to 1 214 000) and the number of health professionals in rural areas nearly fivefold (from 328 000 to 1 576 000). In addition, a spectacular number of barefoot doctors and part-time health aides and birth attendants are manning the front line of the primary health care system. It has thus been possible to change radically the situation inherited from old China where rural areas were destitute of doctors and medical support, so that the peasants were deprived of health care, and to apply medical science and technology for the benefit of the people.

As early as in the first decade after the establishment of the People's Republic, venereal diseases and fulminant and acute communicable diseases such as plague, smallpox, kala-azar, relapsing fever, and typhus were successfully eliminated. In the case of schistomiasis, which presented a grave danger to the health of the peasants and severely diminished agricultural production, the number of patients, the snail-infested area, and the number of endemic counties and towns have been cut by two-thirds. The number of malaria patients has decreased from 30 million in pre-liberation days to about 3 million. Ten million patients with endemic goitre have been cured. The incidence of most of the endemic parasitic diseases and other communicable diseases has significantly declined. China's mortality rate has decreased from 25 per 1000 before 1949 to 6.2 per 1000, and the infant mortality rate from 200 per 1000 births to about 12 per 1000 births in urban areas and 20–30 per 1000 in the countryside, while the mean life expectancy has increased from 35 years in pre-liberation days to about 68 years today. These achievements cannot be divorced from the rapid development of rural health services and the broad coverage provided by primary health care.

Of course, this does not mean that the work is without problems. There are still many problems and shortcomings that will require an even greater effort to remedy.

Since the Third Plenary Session of the Eleventh Central Committee of the Communist Party of China in December 1978, the Central Committee of the Party and the State Council have formulated valid policies to accelerate the development of the national economy, realize "The Four Modernizations" (i.e., modernization in the areas of industry, agriculture, national defence, and science and technology), and attain a high level of socialist material civilization and cultural development. The national economy is developing at a reasonable rate with good economic returns; people are enjoying more substantial benefits, and the living conditions of the urban and rural populations have improved significantly. The situation is even more gratifying in the countryside.

The goal has been set of overhauling and consolidating the rural health

A primary health care team meets to plan activities

Health survey in a rural area

"Prevention First" is a basic principle of China's rural health services

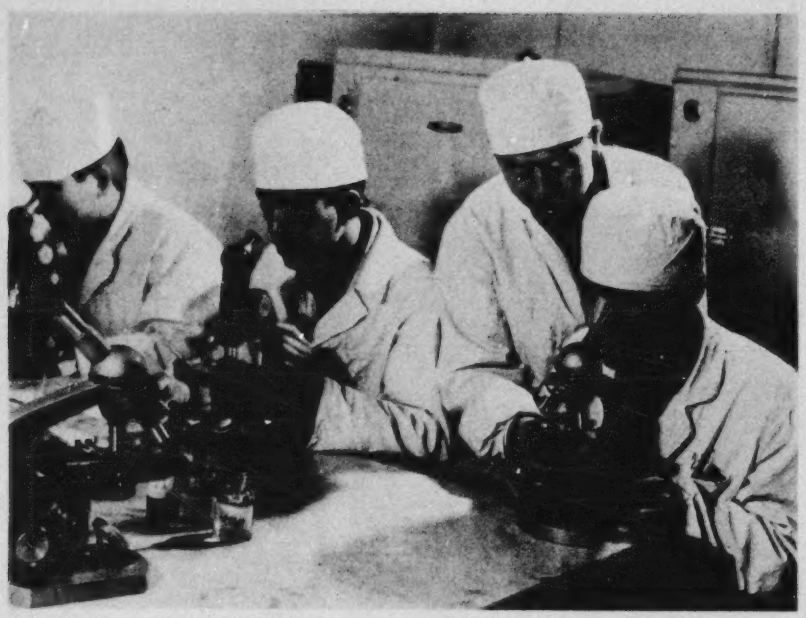
Taking samples of drinking-water for analysis

Family planning: a young couple is instructed by a barefoot doctor in the use of contraceptive pills

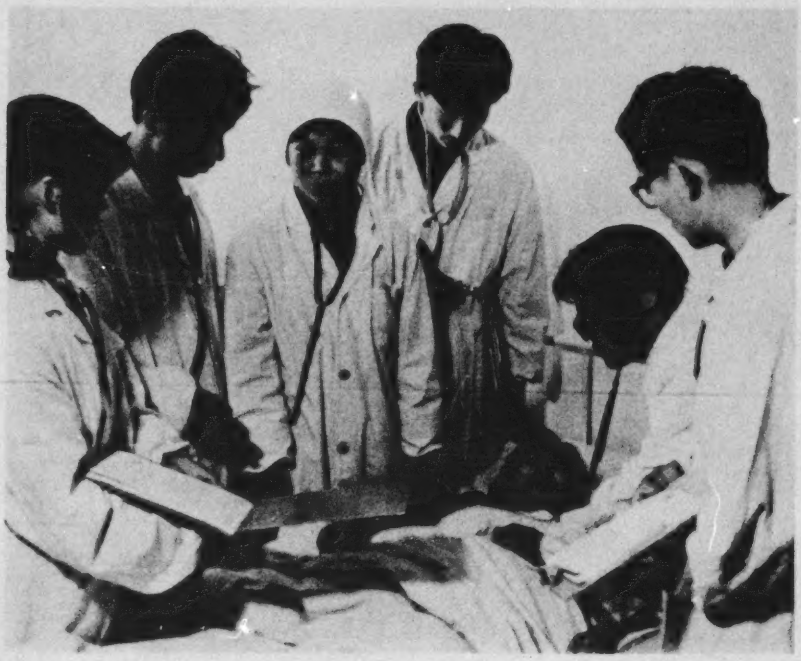
Dispensing medicinal herbs. These herbs play an important part in China's traditional pharmacology

Mobilizing the community for a Patriotic Health Campaign

The Campaign gets under way as the streets are swept and cleaned by the people



Laboratory workers being trained at a county hospital



Instructing barefoot doctors in a hospital ward

Encouraging hygienic habits in children

Feeling the pulse—a traditional method of diagnosis

Involvement of the people in health management. *Above:* One of the "leading groups" or subcommittees dealing with cooperative medical care at the brigade level. *Below:* People's representatives at the county level discuss the launching of a Patriotic Health Campaign

The people pay their contributions towards cooperative medical care

Funds are submitted by brigade accountants to the group dealing with cooperative medical care at the commune level

services in China, by stages and in groups, in order to satisfy the requirements for rural economic development, for material civilization and cultural development, and for the upgrading of the rural health services. A programme has been launched to improve the health services—as a first step—in about one-third (some 700) of the counties before 1985. Specific financial, material, and technical resources have been earmarked for this purpose. These counties will serve as examples and provide the impetus for the steady improvement of rural health services throughout the country. Starting in 1980, the first group of 300 counties has undergone reorganization and reconstruction; the leadership of the health institutions at county and commune level has been reorganized and provided with the necessary training; large numbers of health professionals, rural doctors, and barefoot doctors have been upgraded; rules, regulations, and management techniques have been improved; the service space and living quarters of some county and commune health institutions have been renovated or expanded; and medical equipment has been renewed and improved—all of which has enhanced the capacity of the counties concerned to prevent and treat diseases and provide guidance and support to the basic levels. Significant improvements can be noticed in technical and managerial efficiency and in the quality of services within the context of the three-level medical and health network, much to the satisfaction of the communities served. The reorganization and reconstruction of the health services in the second group of some 400 counties will start in 1983. China's plan is to persevere in this task hand-in-hand with the development of the economy in the hope that, by the end of the century, the upgrading of health services in all counties will be completed to all intents and purposes. At the same time, in order to support social development, it is necessary to push ahead with the popularization of health education, patriotic health campaigns, the mobilization of the masses for afforestation, the improvement of working and living conditions, the production of more biogas, and an increase in the amount of capital construction in the rural health services, to satisfy, at a comparatively higher level, the growing demands of the peasants and contribute to the upgrading of the health level of the rural population.

China appreciates and supports the global goal of "health for all by the year 2000" promulgated by WHO and based on primary health care. This goal coincides with the country's aims as regards health service development and reinforcement of rural health care. The public health authorities intend to continue to cooperate closely with WHO with a view to furthering the work in the three Primary Health Care Collaborating Centres at Yexian, Jiading, and Conghua. The multilateral and bilateral cooperation that China is enjoying through WHO and other international organizations—as well as with developing and other countries—is of benefit to all, and as China is practising an open-door policy, the development of her health services opens up wide prospects for such cooperation. China maintains that, to develop a national economy and achieve the goal of "health for all", it is imperative to have a peaceful international environment and a new international economic order based on the equality of all nations. Imperialism, new or old

colonialism, and hegemonism must not be allowed to persist in military and political expansion and economic plunder. The health workers of China desire to join hands with the peoples of all nations and their colleagues in the health profession to make their due contribution to the attainment of the goal of "health for all by the year 2000", to world peace, and to the progressive cause of mankind.

3. Aspects of Primary Health Care in China*

The Three-Level Network of the Health Care System[1]

Organization of the system

The health care system in China must be seen in the context of the country's sociopolitical system. The organization of the country's economy (based on public ownership and collectivism), particularly at the grassroots level, influences both the organization and financing of health care in the rural areas. The emphasis on self-reliance and the mobilization of the masses through the Patriotic Health Campaigns, in operation since 1952, have made community participation and involvement a way of life. Within this system, health is seen as an integral part of the socioeconomic life of the community, with social control and intersectoral support of health activities existing at the following levels:

(i) national, central or state level,
(ii) provincial level (including 5 autonomous regions and 3 municipalities),
(iii) prefectural level (the prefecture being an administrative region with delegation of authority from the provincial government),
(iv) people's county level,
(v) people's commune level,
(vi) production brigade level.

* Based on the reports of the four teams set up at the Seminar.
[1] Based on the report of Team 1, consisting of Dr Guo Ziheng (China), Dr N. L. Maskey (Nepal), and Dr B. Wint (Jamaica).

The health care system at each level is related to and accountable to the corresponding level of overall administration of the decentralized government system. Two functions are combined at each level, that of administrative leadership and that of technical guidance and supervision. The line of authority and accountability is only to the respective governmental administrative level, while the line of technical support, technical supervision, and referral is linked with all levels in a two-way system (see Fig. 2).

The three lower levels—the *county*, *commune* and *production brigade levels*—make up what is known as *the three-level network of the health care system*.

The following principles guide the development of the health care system in China:

(*a*) emphasis on prevention, in particular through the Patriotic Health Campaigns;
(*b*) priority attention to health services in the rural areas (where 80% of the people reside), without overlooking urban health services;
(*c*) integration of traditional Chinese medicine with western medicine;
(*d*) flexibility in the further development of medical and health services;
(*e*) emphasis on the one-child family;
(*f*) strengthening of health manpower training and development of managerial skills.

The health care system in Yexian County

General remarks

Yexian County, with a population of 833 863, has 27 people's communes, 1010 production brigades, and 4225 production teams.

The three-level network of the health care system in Yexian County consists of 7 medical and health institutions at county level, 27 Commune Health Centres, and 1010 Brigade Health Stations.

All the county-level institutions are State-owned; 14 of the Commune Health Centres are State-owned, and the rest are subsidized by the State. The Brigade Health Stations are owned and financed on a collective basis.

The network operates through *three parallel systems*: the medical care system, the epidemic prevention system, and the maternal and child care system. At each level these systems are interrelated.

The production brigade level (see Fig. 3)

The brigade level constitutes the first level of contact between the community and the health system and forms the basis of the three-level network. At this level, primary health care services are provided through the *Brigade Health Station*, which is staffed by one or more multipurpose *barefoot doctors*, who receive technical supervision and guidance from the Commune Health Centre.

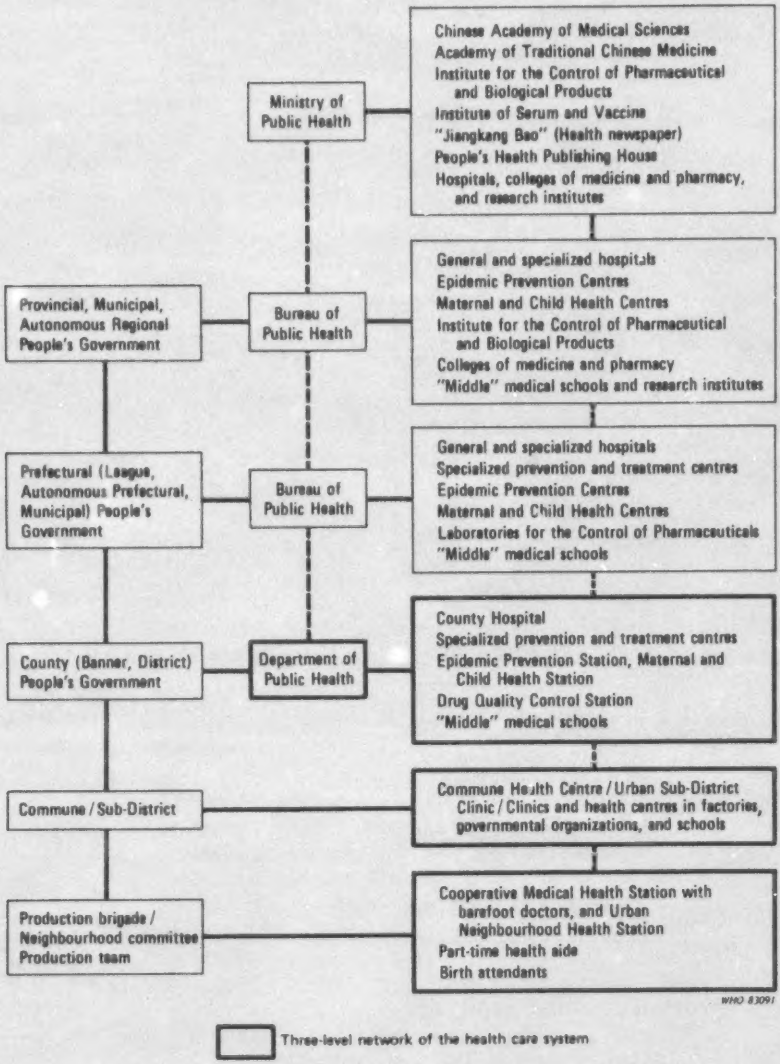

Ministry of Public Health
Chinese Academy of Medical Sciences
Academy of Traditional Chinese Medicine
Institute for the Control of Pharmaceutical and Biological Products
Institute of Serum and Vaccine
"Jiangkang Bao" (Health newspaper)
People's Health Publishing House
Hospitals, colleges of medicine and pharmacy, and research institutes
Provincial, Municipal, Autonomous Regional People's Government
Bureau of Public Health
General and specialized hospitals
Epidemic Prevention Centres
Maternal and Child Health Centres
Institute for the Control of Pharmaceutical and Biological Products
Colleges of medicine and pharmacy
"Middle" medical schools and research institutes
Prefectural (League, Autonomous Prefectural, Municipal) People's Government
Bureau of Public Health
General and specialized hospitals
Specialized prevention and treatment centres
Epidemic Prevention Centres
Maternal and Child Health Centres
Laboratories for the Control of Pharmaceuticals
"Middle" medical schools
County (Banner, District) People's Government
Department of Public Health
County Hospital
Specialized prevention and treatment centres
Epidemic Prevention Station, Maternal and Child Health Station
Drug Quality Control Station
"Middle" medical schools
Commune / Sub-District
Commune Health Centre / Urban Sub-District Clinic / Clinics and health centres in factories, governmental organizations, and schools
Production brigade / Neighbourhood committee Production team
Cooperative Medical Health Station with barefoot doctors, and Urban Neighbourhood Health Station
Part-time health aide
Birth attendants
WHO 83091
Three-level network of the health care system

Fig. 2. Organizational levels of medical and health services in the People's Republic of China, showing the three-level network of the health care system

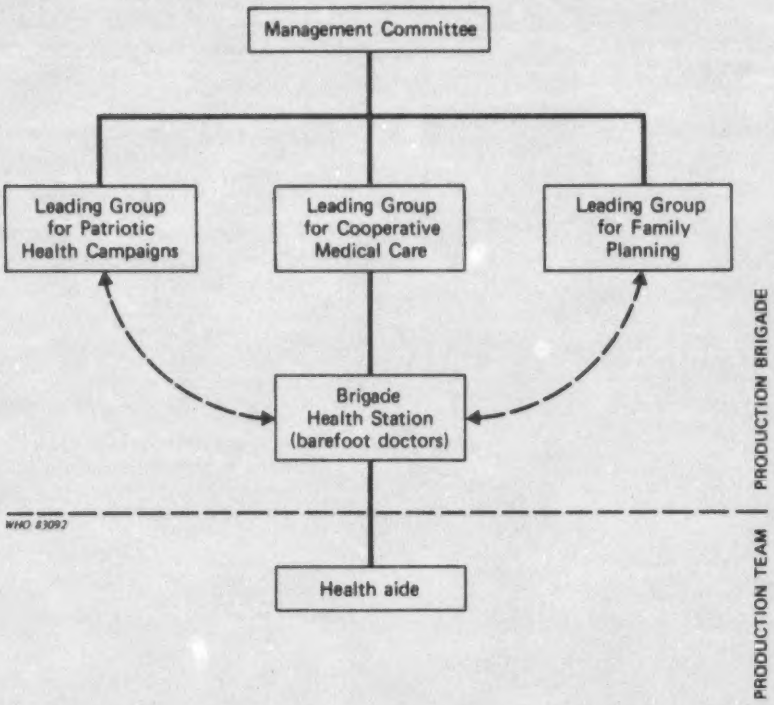


Fig. 3. Organization at the production brigade and production team levels (Yexian County)

The primary health care activities of the station include:

— participation in mobilizing the masses for Patriotic Health Campaigns
— prevention and treatment of locally prevalent diseases
— pharmacy, including use of medicinal herbs
— basic maternal and child health care
— family planning and contraception advice and services
— immunization
— health education
— control of communicable diseases
— technical guidance concerning water supply and environmental sanitation.

Maternal and child health activities are usually undertaken by female barefoot doctors.

Every production brigade is subdivided into one or more production teams, for each of which there is usually one *health aide*. This aide is trained and supervised by the barefoot doctor and carries out first-aid and health promotion activities among members of the production team.

The barefoot doctors work in the fields at busy seasons, and health aides are expected to do part-time work as members of production teams.

The barefoot doctors are accountable to the brigade management in the way shown in Fig. 3. While the barefoot doctors are placed directly under the Leading Group (or Sub-Committee) for Cooperative Medical Care, they provide technical inputs to the Leading Group for Patriotic Health Campaigns and the Leading Group for Family Planning.

This relationship ensures the total and active involvement of the community in primary health care, since the leading groups are responsible for the planning and management of various medical and health activities, including the mobilization of the masses and the financing of health care.

The people's commune level (see Fig. 4)

At the people's commune level, the institution responsible for medical and health care is the *Commune Health Centre*, which is functionally divided into three sections: *medical care*, *community health*, and *general services*. The community health section covers both the epidemic prevention and maternal and child health systems. The sections are responsible for the following services:

Medical care section	— outpatient services
	— inpatient services
	— drug preparations
Community health section	— disease surveillance and epidemic prevention
	— maternal and child health care
	— the cooperative medical care scheme
	— Patriotic Health Campaign activities
General service section	— general administration
	— logistic support

To provide these services, the health centre has a staff that ranges from physicians to health aides and general service workers. The health centre at Xu Jia Commune has 26 staff members, while that at Guoxi People's Commune has 40 (see Table 1).

The services provided by the health centre are mainly of a supportive nature. Over 90% of the inpatients treated are referred from the brigade level. The appropriate technical sections are responsible for the technical supervision and training of barefoot doctors at the production brigade level. Guoxi People's Commune, which has 23 production brigades, is divided for supervisory purposes into five service areas, each comprising 4–5 production brigades.

The health centre in turn receives technical supervision from the county level. Medical cases are referred to the Yexian County Hospital. Epidemic prevention and maternal and child health activities receive technical support from the county-level Epidemic Prevention Station and Maternal and Child Health Station, respectively.

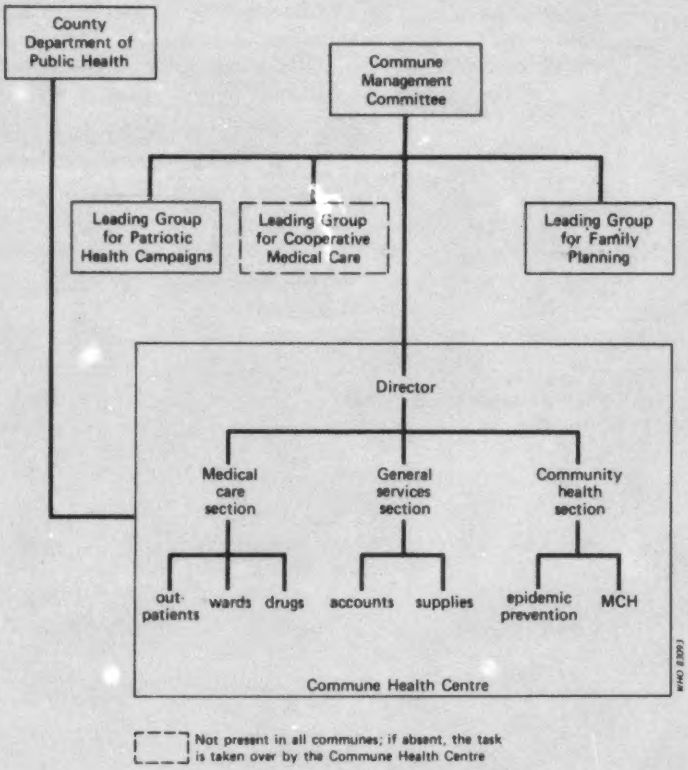


Fig. 4. Organization at the people's commune level (Yexian County)

Unlike those at other levels, the health centre at the commune level is administratively accountable to both the Commune Management Committee and the County Department of Public Health. This is because of the financial and staffing inputs from the county level.

The relationship of the health centre with the commune is shown in Fig. 4. Like the management committee at the brigade level, the Commune Management Committee has under it three "leading groups": the Leading Group for Patriotic Health Campaigns, the Leading Group for Cooperative Medical Care, and the Leading Group for Family Planning. However, whereas the Brigade Health Station's link with the Brigade Management Committee is through the Leading Group for Cooperative Medicine, the Committee Health Centre comes directly under the Commune Management Committee.

Table 1. Staffing patterns at two health centres in Yexian County

	Xu Jia Commune Health Centre	Guoxi Commune Health Centre
Physicians (western medicine)	3	5
Traditional Chinese doctors	1	—
Middle-grade physicians		
— western-trained	5	7
— traditional Chinese	—	1
Nurses	—	2
Assistant nurses	3	3
Midwives	1	3
Assistant dentists	1	1
Assistant pharmacists	—	4
Laboratory technicians	1	1
X-ray technicians	—	1
Other technicians	6	6
Administrative staff	1	—
Health aides	1	—
General service	3 (including director)	6 (including director)
Total	26	40

The people's county level (see Fig. 5)

At the county level, the *Department of Public Health* is responsible to the County People's Government for the health services of the county. The Department operates under the technical guidance and supervision, and with the support, of the Prefectural and Provincial Bureaux of Public Health. In turn it provides technical guidance, supervision, and support to the commune and brigade levels. Since the county level is at the apex of the three-level network of health care, the types of service and expertise at that level are more sophisticated and complex than those at the commune level. There are seven medical and health institutions, some under the direct control of the Department of Public Health. Of the seven, three—the *County People's Hospital*, the *County Epidemic Prevention Station* and the *County Maternal and Child Health Station*—form the basis of three independent, yet coordinated parallel systems of medical care, epidemic prevention, and maternal and child care, which cover the three-level network.

Technical supervision; logistic and other support (see Fig. 6)

One of the hallmarks of the three-level network is the degree of supervision and technical support that the lower levels receive from the higher levels.

Although the organizational chart (Fig. 6) indicates a high level of local autonomy, the links between the levels with regard to medical care are quite solid.

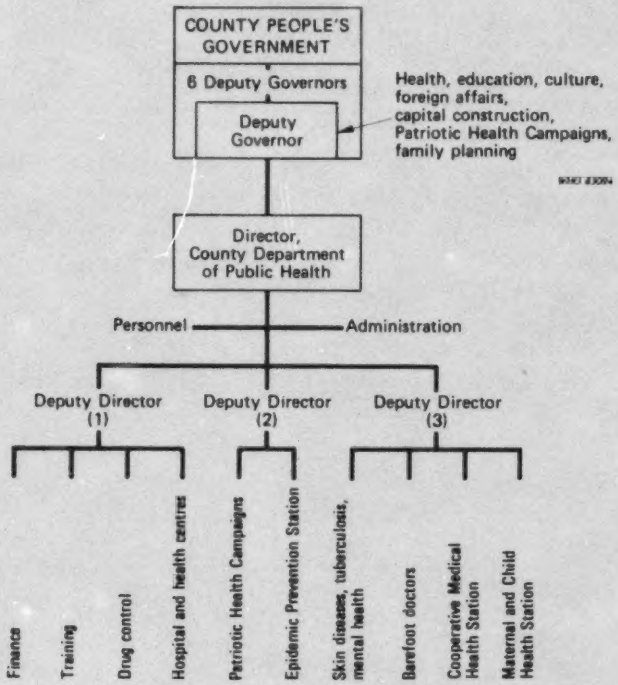


Fig. 5. Organization at the people's county level (Yexian County)

Technical support, consultations, and professional guidance are readily available, not only on request or through the referral system, but on a regular basis through meetings, field visits, and training seminars. There is frequent staff movement between the various levels for specific activities.

From time to time, the lower levels also receive *logistic support* from the county level in the form of medical equipment.

As stated earlier, 14 of the Commune Health Centres are owned by the State. They receive yearly *financial allocations* from the County Department of Public Health. The Department also subsidizes the other health centres in varying degrees, for example, by paying 60% of staff salaries. In this way administrative and technical control is maintained over the health centres.

The Brigade Health Stations, being constructed, staffed, and managed on collective lines, receive no financial subsidies from the county level. However, apart from technical support and guidance from the county level through the health centre to the brigade level, technical standards are maintained through the training of barefoot doctors and the provision of guidelines on the management of various activities.

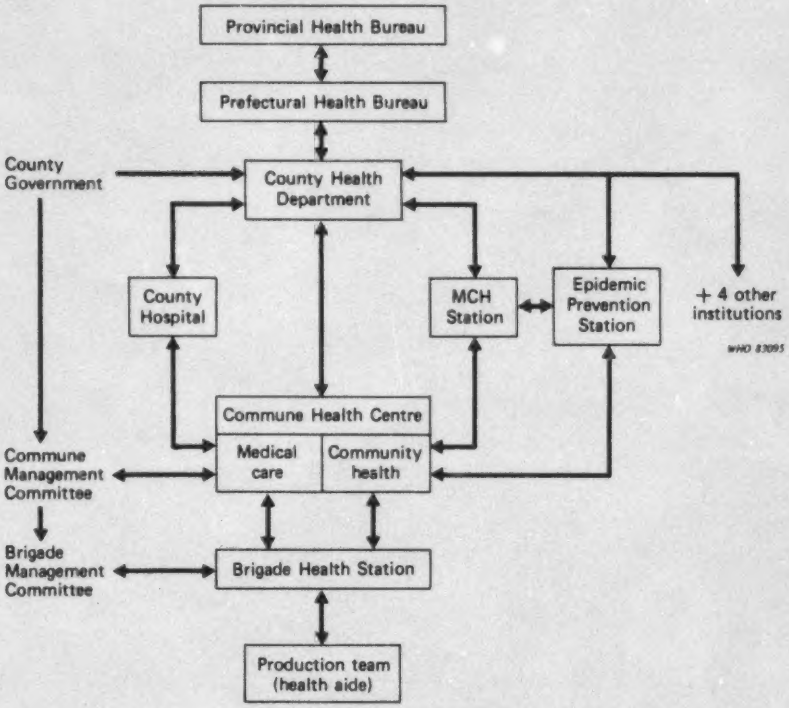


Fig. 6. Technical supervision and control (Yexian County)

Referral (see Fig. 7)

The three-level network facilitates the referral of medical care problems from the brigade to the commune and county levels. These referrals include: referral of patients, referral of specimens for diagnosis, and requests for expert personnel to provide consultations on specific problems. A system using standard referral forms has been developed.

There is flexibility within the system. At the Yexian County Hospital, for example, direct referral to the Provincial Hospital is the general rule since the distance to the Prefectural and Provincial Hospitals is about the same. The patient also has the choice of by-passing lower-level facilities if he can afford to do so. The extent to which this is done is not known.

Health information (see Fig. 8)

At the *production brigade level*, the barefoot doctors maintain simple records at the health station. These include a chronological register of patient visits, an individual patient record filed by a production team, a family

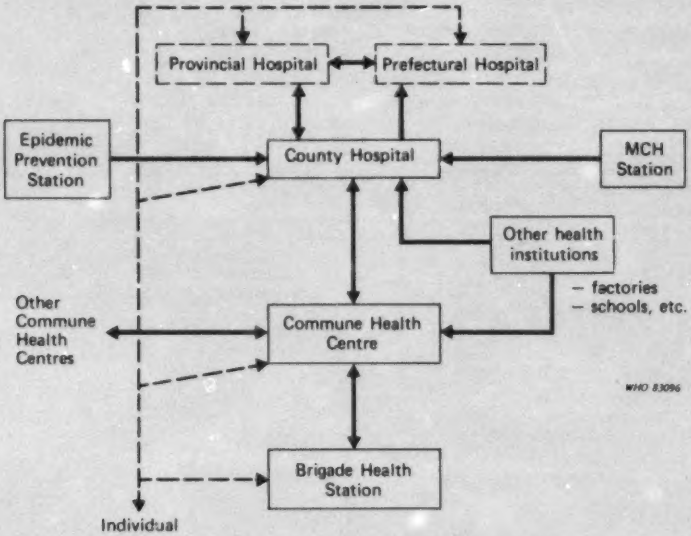


Fig. 7. Referral system (Yexian County)

census record, an immunization record by year of birth, and a register of deaths.

Not much collation or analysis is done at this level, but quarterly data on maternal and child health and immunization, as well as an annual financial statement, are submitted to the Commune Health Centre.

The 24 notifiable diseases are notified to the commune level on individual forms as they occur.

At the level of the *commune health centre*, collation of the information from all the brigades is carried out by statistical offices. At the Guoxi Commune, various data on health are displayed in the form of tables, charts, and figures.

Except for the reporting of communicable diseases, which varies according to the urgency of the situation, reporting to the county level is standardized. Information on the cooperative medical care scheme, workload, staffing, etc., and a statement of income and expenditure are transmitted quarterly on standard forms to the County Health Department. This department also receives biannual reports containing inpatient and outpatient statistics. Information on maternal and child health is reported biannually also to the County Maternal and Child Health Station.

An annual report is submitted to the Commune Management Committee as well as to the County Health Department.

At *county level*, information from the County Hospital, Maternal and Child Health Station, and Epidemic Prevention Station is collated with that received from the Commune Health Centres by the County Health Department and submitted biannually to the County Government Office as well as to the Prefectural Public Health Bureau.

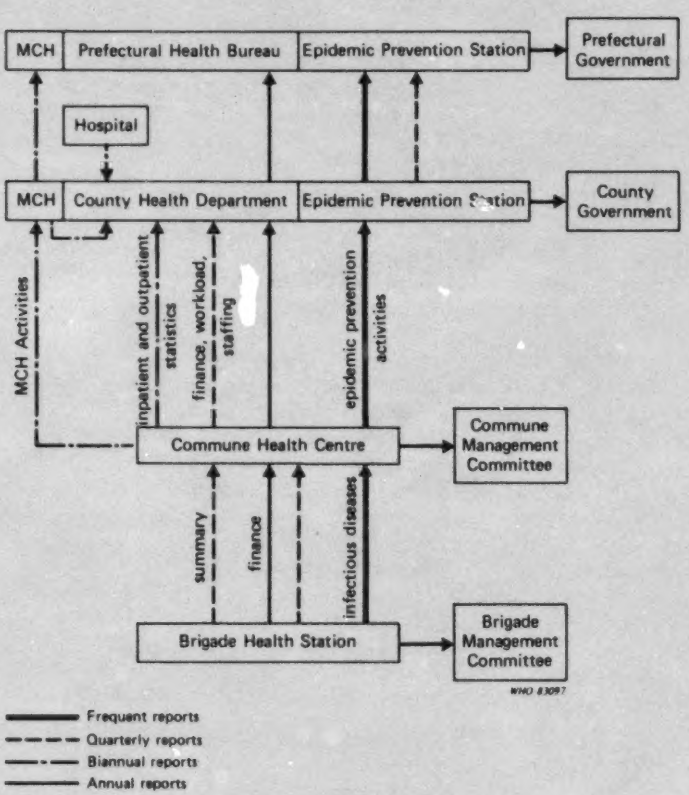


Fig. 8. Health information system (Yexian County)

There is also direct reporting between the Maternal and Child Health Station and the Epidemic Prevention Station, at the county and prefectural levels.

There is no indication of any feedback of information from any higher level to the level at which the data are generated.

Health education

At county level, the Epidemic Prevention Station and the Maternal and Child Health Station in particular provide technical support to health education at the lower levels. The subjects covered include disease prevention and eradication and maternal and child care. Health education messages are distributed through various media.

Health education activities are carried out at all three levels of the network and are particularly intensified during Patriotic Health Campaigns. The

Leading Group for Patriotic Health Campaigns facilitates health education activities at the brigade level, thereby mobilizing the masses for specific health drives. Examples are: the new village construction programme in the He Ye Brigade of Xu Jia Commune, and the Patriotic Health Campaign launched by the Cai Liang Brigade of Guoxi Commune.

Legislation

A number of regulations have been initiated by the Ministry of Public Health and approved by the State Council, such as the Food and Hygiene Regulations, the Acute Infectious Disease Control Regulations, the Drug Quality Control Regulations, etc. These regulations have also been adopted by the various provincial governments and adapted to suit local conditions.

The Ministry of Public Health has also drawn up a number of regulations including those relating to the management of various medical and health institutions in the county. Some of these regulations have been drawn up in consultation with other appropriate ministries.

Government regulations on the control of communicable diseases are strictly enforced. In particular, the mechanism for legal notification of these diseases in the three-level network has been strengthened. The notifiable diseases must be reported within 24 hours.

The production brigades may also draw up their own health and sanitation regulations. One example is that of the He Ye Brigade of Xu Jia Commune, which drew up regulations related to health and sanitation during its village reconstruction programme.

Problems and future plans

The following problems and shortcomings in the three-level network have been observed:

— an inadequate level of professional technique and management
— incomplete information and statistics
— inadequate funds
— crude medical equipment
— unstable results in the control of communicable diseases such as hepatitis and dysentery
— failure of health education to have the desired impact.

Plans for future improvement include the following:

— further reinforcement of the three-level network, including strengthening of support activities
— further strengthening of epidemic prevention and maternal and child health activities, especially through the Patriotic Health Campaigns
— further strengthening of training, especially that of barefoot doctors
— improvement in the health information system and statistics
— consolidation of the cooperative medical care system.

The People's Involvement in, and Management of, Health Care[1]

Introduction

When the People's Republic of China was founded in 1949, those responsible for the welfare of the Chinese people were confronted with a backward and poverty-stricken country. Faced with problems on a huge scale, China had little choice but to mobilize all its resources, especially its people, in the pursuit of social and economic development. The mobilization of the people for development required their active participation, primarily in production work but also in the management of social affairs.

In rural China, people are organized into economic production units. It is through these collective organizations, which exist at the team, brigade, and commune levels, that all social development activities, including health care, are carried out. Thus, health concerns are an integral part of local community life, i.e., primary health care is a "way of life". People participating in the management of their respective productive units are also directly participating in the management of their own health services. People are not organized separately for health care.

Another key feature of the Chinese situation is the organization of mass campaigns (Patriotic Health Campaigns) originating at the higher government levels. Through a structure that has its own organization at all levels down to and including that of the production brigades, these campaigns can mobilize people for mass participation in health. Parallel organizations, the most important of which are the Communist Party, the Youth League, and the Women's Federation, play an active role in the organization and implementation of the Patriotic Health Campaigns. Because of the particular importance of these campaigns they will be described in a separate section (see pages 44–46).

The direct involvement of people at production levels in health and economic development, combined with the promotion and management of mass health campaigns at all levels, has permitted China to achieve remarkable results in the field of health. Without this involvement, these results would not have been possible.

[1] Based on the report of Team 2, consisting of Dr A. I. A. Biely (Sudan), Dr O. S. Chidede (Zimbabwe), and Dr A. Smajkić (Yugoslavia).

The situation in Yexian County

Participation of the people in political and mass organizations

The Chinese people play a role in government and are also politically involved through the people's organizations. The most important and influential organization in China is the Communist Party (which is not synonymous with "the Government", though it influences and controls it). Other people's organizations are the Youth League and the Women's Federation already mentioned.

A brief description of each of the people's organizations will be followed by a more detailed account of how they interact at the brigade, commune, and county levels with governmental and other decision-making bodies.

The Communist Party is the highest political authority at all levels in China. It determines overall policies and the ideological framework within which policies are to be implemented at each level. At each level, the political orientations and decisions of the higher levels of the Party are translated into mass activities to improve the overall productivity and social development of the collectivity and to support and reinforce government administration. It also monitors policy implementation by guiding, supporting and supervising the government administration, the production system, and the mass organizations. It also monitors the implementation of health policies.

In Yexian County, the Party is organized at the brigade, commune, and county levels (see Fig. 9). Party members are carefully selected. Of the 833 863 people living in the county, only 37 000 are Party members. The peripheral unit of the Party organization is the Brigade Branch, whose members elect a 5-member cell to deal with the day-to-day affairs of the Party. In addition, they elect their representatives, known as deputies, to the Commune Congress of the Chinese Communist Party every two years. These deputies can be re-elected only once, and their number varies according to the number of brigades in the commune and the number of Party members. The County Congress is composed of members elected directly by the Party members of the whole county every two years.

At the commune and county levels, there are smaller committees dealing with the day-to-day activities of the Party. These committees have two main areas of responsibility: the first is concerned with internal Party organization and functioning, e.g., political and ideological work, propaganda, etc.; the other is concerned with questions of production and social matters considered of special importance at given moments, such as agriculture, industry, finance, etc. The work is divided among members of the committee according to these two areas of responsibility.

The Youth League is both a Party organ and a mass organization. Its main aims are to set standards for young people, moulding them ideologically and politically, preparing them to serve the people through organized mass activities, involving them in production work, and preparing them to become future leaders in the Party, in government administration, and in production activities. Like the Party, the Youth League is organized at the brigade,

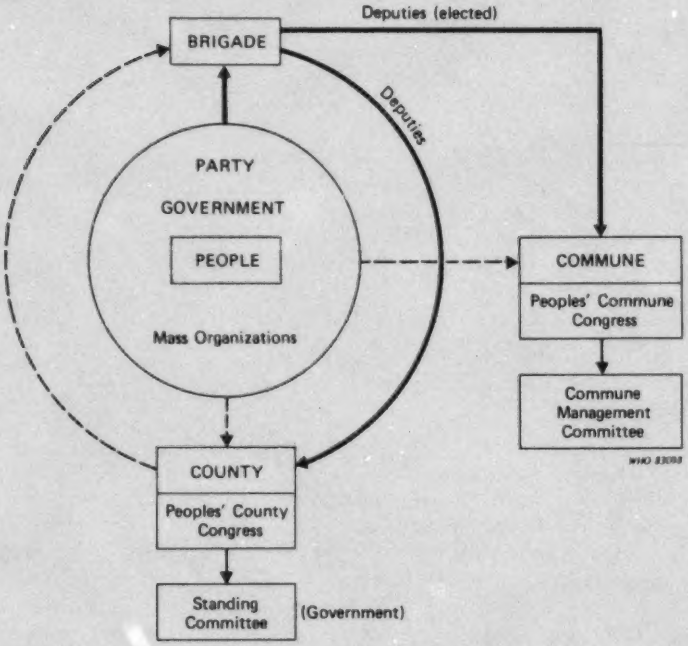


Fig. 9. Community organization, People's Republic of China

commune, county, and higher levels. The membership age is 14–24 years, and members are selected according to such criteria as educational achievement, social commitment, and leadership qualities.

The Youth League has a congress and committee structure paralleling that of the Party. One of its main functions is to promote the involvement of young people in mass campaigns and especially in the Patriotic Health Campaigns. It publicizes the need for such campaigns, promoting participation by the people and the active engagement of its own members in the tasks to be carried out. At each level, the League convenes meetings of League leaders from lower levels and of members in general to ensure that there is a common understanding of campaign targets, methods, etc. They also assist those in want, serving as volunteers in the hospitals and attending to patients' personal needs.

The Women's Federation exists at production team, brigade, commune, county and higher levels. It is a very active mass organization like the Youth League and is structured along similar lines. All women are eligible for membership. Its main function is to mobilize women to participate in activities organized by the Party and by the production and government sectors. It is also responsible for organizing participation by the people in certain health activities such as immunization and gynaecological screening,

family planning, other activities relating to the welfare of women (e.g., marriage counselling, disease prevention, and protection during "The Four Periods"—menstruation, pregnancy, the post-partum period, and lactation), the promotion of sanitation, ensuring equality of pay between men and women, and activities organized in connexion with the Patriotic Health Campaigns, in which it plays a leading role. The Federation is also responsible for the social control and supervision of child education, especially in kindergartens and nurseries.

The involvement of women in decision-making and policy formulation is not restricted to their role in the Women's Federation. Women play an active role in the Party at all levels, in the Youth League, and in brigade and commune management and county government.

Participation of the people in government

The brigade, commune, and county organizations provide the framework for decision-making and implementation of party policies at each level. The term "government" is normally used to refer to the public authority responsible for implementing political decisions, a civil service bureaucracy composed of a number of different "sectors". However "government" also has decision-making functions in such areas as the allocation of resources, the collection of revenue, the planning and supervision of social services, etc. In the decentralized system in China, the formal government bureaucracy exists at county level and upwards. At the county level, however, the structure of the people's government is such that the heads of the bureaucracies are elected and accountable to the people. At the commune and brigade level, elected management committees are responsible for decision-making, the implementation of party policy, and the supervision and control of economic and social activities. The following section describes how one brigade and commune studied by the Seminar are organized. It must be borne in mind, however, that variations exist from brigade to brigade as an inevitable consequence of local control under the decentralized system. Nevertheless, the section illustrates the basic machinery through which people in China participate in decision-making, management of health, and other socioeconomic activities, as well as the policies underlying their participation.

(*a*) *Production brigade level: Cai Liang Brigade*

The organization of the teams and brigade are dealt with below in some depth, in order to facilitate an understanding of the roles of different groups and different individuals. For the commune and county levels, it will not be necessary to go into so much detail, since there is a similar type of organization at each level (Fig. 10).

The first unit of community organization larger than the family and extended family units is the *production team*. Cai Liang Brigade is divided into three production teams, each with its own leadership or management committee. The particular team studied consists of 180 members of whom

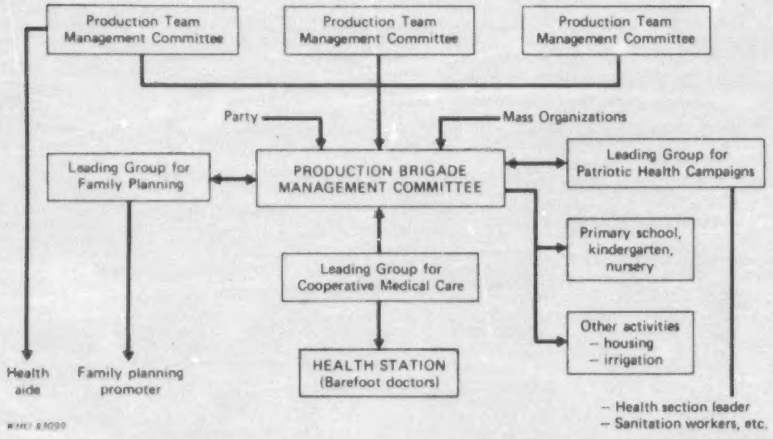


Fig. 10. Involvement of the people in health care at brigade level

slightly less than half are economically productive (approximately half of these are engaged in agricultural work, the other half in "sidelines" such as market gardening, noodle manufacturing, and rabbit raising). A Team Management Committee is elected every 2 years by the active members of the production team. Committee members can be re-elected as long as their fellow team-members are satisfied with their leadership.

The Committee is chaired by a team leader and includes an accountant and a representative of the Women's Federation. The team leader is responsible for the implementation of Party policy on matters of economic production, for achieving the production targets set by the Brigade Management Committee, and for health and environmental sanitation, popular education, and cultural and other social activities. The accountant is responsible for the allocation of work-points and keeps the financial records relating to agricultural production. The function of the representative of the Women's Federation is to mobilize women for production work and to ensure that the special needs of women are met. She is also responsible for health education and family planning motivation and information. In addition to the elected members of the Team Management Committee, a health aide is selected.

At the brigade level there is also a management committee. In the Cai Liang Brigade this consists of seven members, all of whom are elected every 2 years by all members of the Brigade over 16 years of age. They can be re-elected as often as desired by the people. The Brigade leader has to meet with the approval of the Party Secretary of the Commune as well, but need not be a Party member. However, in Cai Liang, the Brigade leader is also the leader of the Party branch. The other members of the Brigade Management Committee are a deputy leader, an accountant, and four others—in this case,

the Chairman of the Women's Federation, the Secretary of the Youth League, a member of the Militia, and a barefoot doctor.

The functions and responsibilities of the Brigade Management Committee are similar to those described in the case of the production team. In addition, it manages the health station, the primary school, the kindergarten, and the nursery. The Women's Federation representative, in addition to her responsibilities at team level, is responsible for the supervision of the nursery and the kindergarten. The Youth League leader, who is also a member of the elected 5-member cell of the Brigade's Party branch, is responsible for implementing Party policy and helping organize and motivate young people for various functions including the Patriotic Health Campaigns.

As already indicated, the Brigade Management Committee is responsible for the overall management, including financing and supervision, of the Brigade Health Station and the Brigade's Cooperative Medical Care Insurance Scheme, as well as the administrative supervision of the work of the barefoot doctors. The Committee decides the number of barefoot doctors required to serve the Brigade, bearing in mind the provincial target of three barefoot doctors per 1000 population. Cai Liang is relatively well-off and has exceeded this target by having three barefoot doctors to serve its total population of 529. The Brigade Management Committee has three "leading groups" or subcommittees, one for Patriotic Health Campaigns, one for family planning, and one for cooperative medical care, the last-mentioned being responsible for the financial management of the Brigade Health Station.

The Leading Group for Family Planning has three members: one from the Brigade Management Committee, one from the Women's Federation, and one from the Youth League. The functions of the Group are mainly supervisory and consist of monitoring efforts to implement family planning policies and ensuring that adequate supplies (e.g., of contraceptives) are available for the family planning programme.

The Brigade's health activities have had some striking results. There have been no cases of malaria since 1976. This has been achieved primarily by the elimination of mosquito breeding sites. The large pond in the village was filled in by the people and houses were built on the site. A large proportion of brigade members have been rehoused, and the building programme now in progress is a major activity. Steps are taken regularly to clean and control the environment. Malaria cases were actively treated, and any member of the Brigade who travels to a malarious area is given prophylactic therapy by the barefoot doctor.

All houses in the area have courtyards containing shallow wells fitted with hand-pumps. Some of these wells have dried up because of drought, and water is accordingly fetched on handcarts from large wells outside the village. Water is routinely boiled before drinking.

All homes have a special kind of pit latrine that makes it possible for the nightsoil collectors in the Brigade to transport excreta from homes to a site outside the village. There it is mixed with animal manure, straw, and earth and left for 2–3 months to decompose before being used as organic fertilizer.

To facilitate the promotion of sanitation and hygiene, the Brigade is divided into three geographical areas, each of which roughly corresponds to that inhabitated by one of the production teams. The people of each area elect a health section leader, who is responsible for the cleanliness of the streets and the houses. The section leader also plays a key role in the organization and implementation of Patriotic Health Campaigns, provides family health advice in general, and encourages and supervises the work of the nightsoil collectors.

(*b*) *People's commune level: Guoxi Commune*

At the commune level, there is a People's Congress consisting of deputies elected by the brigades. This Congress elects a management committee which is responsible for agricultural production, diversified economic activities (commune enterprises), public security and law enforcement, cultural activities, education and health. The members of the Commune Management Committee hold office for 2 years and are eligible for re-election but only for one additional term. The Committee must always include representatives of the mass organizations, such as the Chairman of the Women's Federation and the Secretary of the Youth League. The Director of the Office of Family Planning is also a member.

The Commune Management Committee is involved in the health promotion activities undertaken as part of the Patriotic Health Campaigns. While it is responsible for the Commune Health Centre in a general sense, the Committee is not directly involved in its management or financing.

The community structure at the brigade and commune levels ensures the full integration of different sectoral activities in the overall interest of the community. Bureaucracies separate activities into sectors: people do not. An example of community-organized intersectoral action for health is the practice of providing school and kindergarten teachers with a one-month training course at the Commune Health Centre. Here they learn first aid, health monitoring, and information of value for health education in schools. Some 900 teachers have been trained by the Health Department in Yexian County.

(*c*) *People's county level: Yexian County*

The People's Congress at county level is elected by the whole electorate of the county. There are 370 representatives in Yexian County, and they are elected for a period of 3 years. The Congress meets every year and elects a Standing Committee, which meets every 2 months.

The Standing Committee plays an important role in ensuring that the government administration is sensitive to the needs and concerns of the people. Its members regularly visit communes and brigades where agricultural undertakings, industries, and health services are inspected. They hold discussions with the people and representatives at the brigade and commune levels, collect suggestions, listen to complaints and problems, etc. They report back to the Committee, making recommendations which are submitted to the County Government for implementation.

Seven individuals, i.e., a Governor and six Vice-Governors, are elected to serve as the leaders of the government administration. Each is responsible for certain sectors, and has a bureau to implement government programmes in the county. Three of these government officials are members of the Standing Committee of the Communist Party.

The County Government is responsible *inter alia* for the various health institutions run by the County Department of Public Health. Thus, through the Standing Committee, suggestions for change, as well as reports of people's complaints and problems, can be channelled to the appropriate government officials.

The Patriotic Health Campaigns

The Patriotic Health Campaigns, which started 30 years ago, are a unique feature of community involvement in health promotion in China. The whole population is mobilized and trained to carry out a series of activities relating to public and personal behaviour, improvement of the environment, control of pests, food hygiene, care and education of children, etc. Over the years, a great deal of experience has been gained in the organization and management of this mass movement, which has been given top political priority. One of the factors that has facilitated the active mobilization of the people has been the undoubted success of the Campaigns: many communicable diseases have been drastically reduced and some have even disappeared altogether.

The activities of the Patriotic Health Campaigns involve all sectors concerned with the promotion of health and the prevention of ill health at source, i.e., those dealing with the social, economic, and environmental factors contributing to ill health.

To carry out these activities, there is an organizational network of committees at all levels—national, state, provincial, prefectural, county, commune, and brigade. Each of these committees is responsible for implementing the policies and priorities of the National Committee, which is a subcommittee of the Central Committee of the Party. Their members at each level include high-ranking Party and government officials and representatives of the mass organizations. They also include persons in charge of such sectors as education, agriculture, environmental protection, and finance, thereby indicating the importance attached to the Campaigns (see Fig. 11).

The Patriotic Health Campaign Committees and the organizations represented on them are also the principal channels for the transmission of health information and health education. These are also transmitted through the mass organizations (e.g., the Women's Federation and the Youth League) to families and individuals.

(*a*) *Organization at county level*

At the county level, there is a government-appointed Patriotic Health Campaign Committee with 15 members. The Vice-Governor for Education,

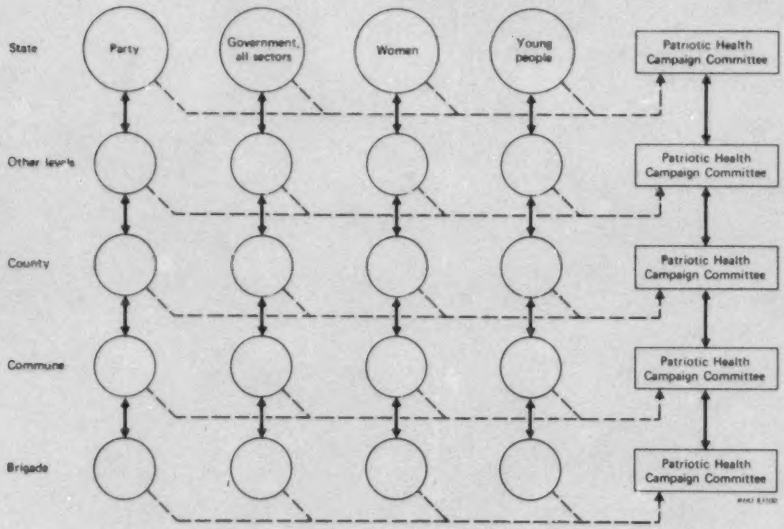


Fig. 11. Organization of Patriotic Health Campaigns

Health, and Culture is the Director of the Committee. One of the Deputy Directors is a member of the Standing Committee of the Communist Party, while the other is a senior government administrative officer. The other members of the Committee consist of senior government directors from a number of sectors including those of health, education, culture, public security, industrial affairs, finance and trade, the Environmental Protection Office, the Economic Affairs Committee, and agriculture. The leaders of the Women's Federation and the Youth League are also members. The Committee meets four times a year to review progress in the implementation of plans, discuss how to improve the programme, identify problems, and establish the priorities for the next few months. These priorities have a seasonal element, being associated with the agricultural cycle and specific seasonal health hazards, for example, fly and mosquito control during the summer and autumn.

Each committee member is responsible for certain activities through the organization he or she represents. In addition, the committee members are in direct touch with the leaders of the Commune Patriotic Health Campaign Committees. For example, on 5 June 1982, a regular meeting was held with all these leaders. During such meetings, problems and progress are reviewed. The individual committees members at the county level also visit brigades regularly to see how their campaign work is progressing. The technical units of the Health Bureaux and the Sanitation and Epidemic Prevention Stations also provide technical information, based on surveys and reports, to the County Patriotic Health Campaign Committee.

(*b*) *Organization at the commune and brigade levels*

At the commune level, the Management Committee appoints a Leading Group for Patriotic Health Campaigns with seven members. In Guoxi Commune the leader of this group is the Vice-Chairman of the Commune Management Committee responsible for health and education. The 25th of each month is designated "Health Day" and the whole commune is expected to cooperate in dealing with selected targets. In addition, the Youth League engages in cleaning work every Saturday afternoon. The Community Health Group of the Health Centre provides technical advice to the Leading Group for the Patriotic Health Campaigns.

At the brigade level, the Management Committee elects a leading group for the organization and supervision of Patriotic Health Campaigns. This group is chaired by a member of the Management Committee—in this case, the barefoot doctor—and also includes the Secretary of the Youth League, a primary school teacher, the leader of the Women's Federation and one other person from the Brigade. As in other areas of socioeconomic development, certain specified goals set by higher committees are communicated to the brigades, which are, however, free to add to them. For example, Cai Liang Brigade recently held a Patriotic Health Campaign mass meeting to plan for health activities at harvest-time and the minimization of the health hazards associated with the rainy season. It was decided to exempt sanitary workers from some harvesting activities so that they could spend more time on environmental health work.

Summary of main findings

1. The Patriotic Health Campaigns, with their emphasis on disease prevention and general health promotion were the earliest major initiatives to be taken by the People's Republic of China in the field of health. They mobilized people on a large scale and achieved outstanding results, especially in the field of parasitic diseases (e.g., schistosomiasis and malaria), and vector control in general (the elimination of "The Four Pests"[1]). They continue to play a major role in health. Through the effective use of health propaganda, they promote improved personal hygiene, a cleaner environment and improved general wellbeing. In addition they provide an effective instrument for intersectoral collaboration for health through involvement of the people.

2. Mass organizations, in particular the Party, the Youth League, and the Women's Federation, support the Patriotic Health Campaigns at all levels, by promoting them and by being involved directly in their implementation. Furthermore, these organizations work closely with the health services system. Through the organizational network for the Patriotic Health

[1] "The Four Pests" originally referred to flies, mosquitos, rats, and sparrows. When the elimination of sparrows threatened to produce serious ecological problems bedbugs (and in some cases lice and cockroaches) were substituted for them as the fourth pest.

Campaigns, they ensure adequate coordination and technical support for these campaigns and for the promotion and use of specific services such as family planning and immunization. The mass organizations provide an instrument for the social control of the health care system and ensure its accountability to the people.

3. In the early 1970s, two important and related elements were added to the health system, namely the barefoot doctor and the Cooperative Medical Care Insurance Scheme. With their introduction, the brigades became directly involved in the delivery of health care as an integral part of their socioeconomic responsibilities. They built the Brigade Health Stations and equipped them; they manage the insurance scheme which partially covers the cost of health services received by brigade members at any level; they decide on the numbers of barefoot doctors they can afford; when they wish to improve the level of care provided, they encourage the barefoot doctors to seek the additional training required to upgrade their skills in the fields considered as having priority. All this demonstrates the ability of communities to manage, finance, and supervise health care services effectively.

4. Within the framework of the brigades and teams, workers other than barefoot doctors have been selected for health work. These are volunteers and include health aides, health section leaders, and sanitation workers. Their work is fully organized and controlled by different groups within the teams and brigades.

5. The organizational structures of the brigades and communes, designed primarily for production, are utilized for all social development work. The control and financing by the community of all social and economic activities permits a balanced development in which health goals are intimately interrelated with economic and other social goals and synergism between the activities of different sectors is fully exploited. In China, health is seen as a goal of *all* sectors and not simply the concern of the health sector alone.

Health Manpower Development[1]

General considerations

Comparative national statistics on health manpower for the years 1949 and 1980 show how much has been achieved in this area since the founding of the People's Republic of China:

Category	*1949*	*1980*
doctors (western)	38 000	447 288
middle-level doctors (assistant)	49 400	443 761
nurses	32 800	465 798
pharmacists	483	25 241
barefoot doctors	—	1 463 406

In 1949, the majority of the people—living mostly in rural areas—had very little access even to the few health facilities then in existence. Illness—mainly due to communicable disease—was rampant, poverty was widespread, and most of the population were illiterate.

These factors, aggravated by the magnitude of the country, both in area and population, made conventional strategies for health development quite impracticable.

Strategy for health manpower development

A clear-cut policy for rural health services and health manpower development was therefore evolved. It was based on the following principles:

- priority attention to the development of the rural areas
- rapid coverage of the population with basic health services
- maximum use of human resources with involvement of the people at all levels
- emphasis on disease prevention and health promotion
- integration of Chinese traditional medicine and western medicine
- the use of appropriate technology oriented towards local needs and conditions
- the formulation of a flexible policy and a diversified approach to its implementation
- a high degree of decentralization and emphasis on self-reliance.

[1] Based on the report of Team 3, consisting of Dr A. S. Abdullah (Maldives), Dr A. Galvez (Philippines), and Dr A. B. Njie (Gambia).

Structure of health services

The development of the health services (with the necessary manpower) became a basic and integral component of the country's overall socioeconomic strategy, involving the active participation of the community not only in the decision-making process but in the critical areas of finance and management at all levels of the organizational structure. Close linkages, both horizontally and vertically, ensure a more efficient use of resources and more meaningful support.

The health manpower structure

The health system and its manpower structure have evolved in line with the overall sociopolitical system. In accordance with the basic principle of integration of the State, the collectivity, and the masses, and that of multisectoral coordination, three levels of health manpower are trained and utilized as follows (see also Fig. 12):

1. A series of voluntary part-time health workers are trained and utilized at the production team level, i.e., at the periphery,

2. Rural health personnel, notably barefoot doctors, are trained by the county and commune (on the basis of local needs) and utilized at the brigade level. This category of health personnel is highly localized and cannot be transferred from one brigade to another.

3. Medical and health personnel at medical college level and "middle" medical school level are trained by the State in accordance with national

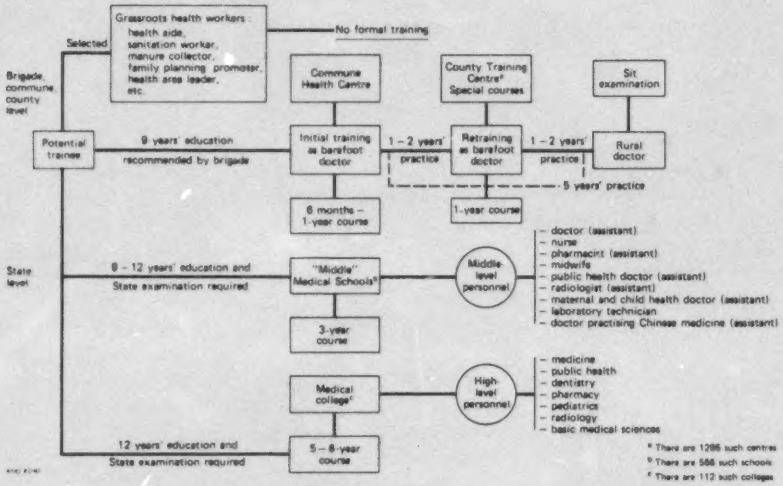


Fig. 12. Components of health manpower development in China

plans and assigned to all medical and health institutions at commune level and above.

Generally, the number and categories of health workers trained at State level are determined by the overall national health plan. At the commune and brigade levels, manpower development is based on actual local needs. There are basic guidelines at the national level such as 1 hospital bed per 1000 population, 1 doctor per 1.3 hospital beds, 2 nurses per one doctor and 1 barefoot doctor per 500 population (approx.). However, at brigade level there is more flexibility, e.g., in the Yentai Prefecture the barefoot doctor/population ratio is 3/1000.

Although machinery exists for upgrading both professional competence and status within any particular level of the health manpower system, there is no systematic career development of the ladder type between different levels and upgrading from one level to another is a matter of individual achievement and/or exceptional circumstances.

Health manpower at the production brigade level

With the organization of villages into production brigades, a cooperative medical insurance scheme for these brigades was evolved on a basis of collective self-reliance. The barefoot doctor at the Brigade Health Station is considered as the nucleus of the three-level rural health care system.

The barefoot doctor

The barefoot doctor is a selected brigade member trained to meet basic health needs and responsible to his community. He is central to the cooperative medical insurance scheme and an important force in primary health care.

(*a*) *Duties*

- operation of the Brigade Health Station
- treatment of common diseases and injuries
- promotion of people's participation in Patriotic Health Campaigns
- disease surveillance and prevention, including immunization and health education
- provision of maternal and child health care in general
- implementation of health programmes according to State, country, and commune plans
- cultivation, collection, and processing of medicinal herbs
- training and supervision of voluntary health workers at grassroots level, and in general of other members of his brigade.

Depending on his medical workload he participates in the other activities of his community, e.g., farming.

(*b*) *Method of selection*

The barefoot doctor is selected by his community, on the basis of nominations by the general membership or in some cases by the Youth League, the final selection resting with the brigade leadership.

(*c*) *Criteria for selection*

- must be a member of the brigade
- must be interested in health work and willing to serve as a health worker
- must have proven ability and a good attitude to his community
- must have initiative and ambition
- must have attained the appropriate educational standard (i.e., at least 9 years' schooling[1])
- must be young and in good health
- if only one candidate is selected, preference usually goes to a male; but if two or more are selected, at least one must be female to handle maternal and child health services.

(*d*) *Training*

The "barefoot doctor" scheme was conceived in order to provide large numbers of health workers, who could be trained inexpensively and quickly in accordance with local needs and would remain true members of their community. Their training is conducted in gradual fashion and based on the integration of political ideology with professional expertise, preventive medicine with clinical medicine, and traditional Chinese medicine with western medicine.

(*i*) *Initial training*

Initial training takes place at the Commune Health Centre and, though based on a written curriculum and national guidelines, it is conducted informally and on the job. Originally of 3–6 months' duration, it now lasts 6 months to 1 year depending on the student's aptitude. Self-instruction and evening tutorials are a common adjunct to this form of training.

In 1974, in order to meet existing demands and upgrade training, a formal systematic initial course of 1 year's duration was introduced at the County Health Training Centres. However, in Yexian County, no such formal courses have been held during the past 7 years, as all Brigade Health Stations had attained a stable and adequate level of staffing. The attrition rate of barefoot doctors in Yentai Prefecture is at the negligible level of 5 per 1000.

(*ii*) *Continuing education*

Continuing education takes the following basic forms:

- On the job or in-service training at the Brigade Health Station, including self-instruction, coaching by more experienced barefoot

[1] In some cases less than 9 years' schooling has been accepted for training in minority groups or in remote communities.

doctors, and periodic supervisory visits from personnel of the Commune Health Centre.

— Regular group meetings once every 10–20 days at the Commune Health Centre, where, together with other barefoot doctors, the staff of the social medicine section conduct discussions and instruct participants on areas of need or special interest.

— Special training courses, held at the Commune Health Centre or at county facilities such as the Maternal and Child Health Station, the Epidemic Prevention Station, or the County Hospital. These courses are designed to meet the specific needs of individual barefoot doctors and communities (e.g., to achieve greater competence in the conduct of labour, or in laboratory or pharmacy work), or to meet specific county needs (e.g., to prepare for an immunization campaign, promote family planning procedures, etc.).

(iii) Retraining

Specific retraining courses are now given at the County Health Training Centres, where a more formal and systematic upgrading of knowledge and skills is undertaken. These courses, which are residential, State-supported, and last 1 year, are open to barefoot doctors with at least 2 years' post-initial training. The centre is well staffed and well equipped with libraries, demonstration models, laboratories, and even facilities for dissection. The Health Training Centre has developed a curriculum for the retraining course based on national guidelines, and each student is given a set of selected textbooks to keep. The curriculum consists of politics (6%), basic medical sciences (33%), clinical medicine (33%) and traditional medicine (28%). The cost per student per year is ¥731.57, distributed as follows:

State contribution (staff salaries, teaching materials, administration, students' food allowance, etc.)	35%
Brigade contribution (allocation of normal work-points)	55%
Student's contribution (50% of cost of meals: ¥6 per month)	10%

(e) Conditions of service

Barefoot doctors, as members of the production brigade, are subject to the same system of remuneration in work-points. However, because of the nature of their work, additional work-points or bonuses are generally awarded.

(f) Upgrading

A "Rural Doctor's Certificate" is awarded to those barefoot doctors with 5 years' experience who pass the appropriate prefectural examination. In this way, their professional status is raised to the equivalent of that of middle-level health workers although they continue to work as health personnel at the local level. This upgrading started in 1981, and 76.4% of the barefoot doctors in Yexian County have passed the examination and received the certificate.

(*g*) *Supervision*

The barefoot doctor is supervised administratively by the community through the Leading Group for Cooperative Health Insurance, a subcommittee of the Brigade Management Committee.

Technical supervision is by members of the social medicine section of the Commune Health Centre, one or more of whom visit the brigade on a regular basis.

Grassroots health workers

In brigades with more than one production team, primary health care activities are carried out through community participation at team level with the following voluntary workers.

The health aide

The health aide is an ordinary member of the production team, selected by the team to render first-aid services to its members, to assist the barefoot doctors in the delivery of health care, and to promote and popularize Patriotic Health Campaigns and other health promotion activities. Initially these health aides take an informal training course of about 4 weeks' duration at the Brigade Health Station, under the guidance of the barefoot doctor, whose responsibilty it is to supervise their activities and further training. Though essentially voluntary workers, some health aides do receive additional work-points.

Sanitation area leader

The sanitation area leader, who is usually also a member of the Brigade Sanitation Sub-Committee, generally supervises environmental health activities within his/her production team's geographical area. He/she visits and inspects streets, compounds, and houses to ensure that sanitary standards are upheld and "educates" defaulters with a view to improvement and compliance. He/she reinforces the efforts of other health workers especially as regards health education and the promotion of maternal and child health and family planning.

Household block leader

Each production team is further subdivided into household groups, usually in cells of 10. Each of these subgroups also selects a leader whose responsibility it is to oversee and reinforce health activities within the subgroup.

Women's leader

There is a women's leader at the production team level, who is accountable to the brigade women's leader. Her main task is to ensure equal rights for

women and protection during "The Four Periods" (menstruation, pregnancy, the post-partum period, and lactation), supervise the nursery/kindergarten, and promote family planning and other health activities.

Family planning promoter

The family planning promoter is a volunteer selected from the production team, who is given the responsibility of educating and popularizing family planning practice within the team. In addition, she checks on the methods used, the degree of compliance, and problems or complications and facilitates remedial action through the barefoot doctor and the maternal and child section of the Commune Health Centre, the two latter being responsible for her training and technical support. She is locally accountable to the Leading Group on Family Planning under the Brigade Management Committee.

Schoolteachers

Teachers at the nursery schools, kindergartens, and primary schools receive training from the Department of Education. Additional informal training on basic hygiene and better health practices is given by the barefoot doctors and staff of the Commune Health Centre as required. In collaboration with the barefoot doctors and the maternal and child section of the Commune Health Centre, close and regular monitoring of the children is maintained, the results being recorded in individual case folders.

In the nurseries visited, the level of positive encouragement and observance of good health practices was most impressive.

Others

Street cleaners, manure collectors, and indeed individual family members all play a part in the promotion of health and sanitation in the community. Individual lay members were well conversant with the "controls", "improvements", and "eliminations" that form the main themes of the Patriotic Health Campaigns, and more importantly they appeared to accept them as part of their way of life.

Health manpower at the commune level

The immediate referral and supervisory centre for the Brigade Health Station is the Commune Health Centre, which serves the various Brigade Health Stations in the commune, in addition to offering clinical, preventive, and promotional services in the village where it is located.

The Xu Jia and Guoxi Commune Health Centres have 15 and 17 inpatient beds, respectively, together with appropriate equipment and delivery

facilities. The staff members (26 at Xu Jia and 40 at Guoxi) include medical college graduates (trained both in western medicine and Chinese traditional medicine), middle-level doctors (also trained in both kinds of medicine), pharmacists, assistant dentists, nurses, and other technicians.[1] Generally speaking, the smaller Commune Health Centres are manned by middle-level doctors rather than medical college graduates and specialists. The larger or major Commune Health Centres offer a wider range of equipment and more advanced technology, and have more beds (an average of 28) and an average of 32 staff members. Their staff contains a higher proportion of college-trained doctors, and they offer a wider range of specialist services in medicine, surgery, obstetrics and gynaecology, and paediatrics. These major centres in turn provide referral, supervisory, and inservice training facilities not only for barefoot doctors and other primary-level workers, but also for the middle-level professionals at the smaller Commune Health Centres.

Health manpower at the county level

People's County Hospital

The Yexian County Hospital has 186 beds and 229 staff members, of whom 175 are in the professional and technical categories, e.g., doctors, middle-level doctors, nurses, and technicians. The professional staff are mainly graduates of medical colleges. The County Hospital acts as a training centre for its own staff as well as organizing advanced courses lasting from 3 months to 1 year for personnel from the Commune Health Centres and the health services of industrial enterprises. Regular visits are paid by physicians from the prefectural level.

In addition, senior staff act as visiting physicians to lower-level facilites, providing consultations and technical demonstrations and serving as consultants at seminars and other training sessions organized at lower-level centres. In turn, staff from the Commune Health Centres are invited to lectures, seminars, and other training activities organized at the County Hospital, as part of their continuing education.

Other county health institutions

Other specialized institutions at the county level—namely the County Maternal and Child Health Station and the County Epidemic Prevention Station—are responsible for overall coordination, management, supervision, and inservice training in their respective areas of responsibility.

(*a*) *County Maternal and Child Health Station*

The Yexian County Maternal and Child Health Station has a staff of 10: 4 college trained doctors, 4 middle-level doctors, and 2 nurses. Additional

[1] For further information, see the Annex.

assistance and guidance are provided by consulting gynaecologists and paediatricians from the County Hospital. The station is entrusted with the professional guidance and training of maternal and child health workers for the levels below the county level, in addition to their main function of providing maternal and child health and family planning services at the county level.

(*b*) *Epidemic Prevention Station*

Amongst the responsibilites of the Epidemic Prevention Station are the prevention and surveillance of communicable and occupational diseases, professional guidance in the Patriotic Health Campaigns, health education, immunization, and occupational health. The centre also conducts training courses in epidemic prevention, immunization, school hygiene, and other aspects of prevention. At the commune level, the corresponding staff, together with those responsible for maternal and child health at that level, form the social medicine section responsible for the training and supervision of lower categories at the commune and brigade levels.

Summary

The following factors have played an important role in health manpower development in the People's Republic of China:

1. Its treatment as an integral part of overall national policies and strategies for manpower development.
2. The integration of the health system into the sociopolitical structure of the nation in line with the integration of the State, the collectivity, and the masses.
3. The appropriateness of the training given, with initial emphasis on meeting the basic needs of the community, notably through the introduction of new categories such as the barefoot doctor.
4. A diversified and flexible approach to the subject.
5. The integration of political ideology with professional expertise in training programmes, so as to reflect the spirit of serving the people.
6. Machinery and facilities for continuing education and meaningful supervision, through linkages between the various levels of the health service, each level being supervised by the next higher level.
7. With the achievement of basic coverage, a shift of emphasis to the upgrading of both the status and professional competence of each category of personnel.
8. A high degree of community support and involvement in terms of both the financing and management of health personnel.
9. The development of various mechanisms to minimize attrition.

Financing Rural Health Care[1]

Introduction

The financing of health care, as observed in Yexian County, is an important policy instrument facilitating the objectives of involvement of the people and self-reliance within the three-level network system.

An assessment has been made of the income of one production brigade and one commune in Yexian County, as well as their financial commitment to health care. Various sources of revenue were identified and estimates made of the incidence of health care costs at different levels of the health structure: the Brigade Health Station, the Commune Health Centre, and the County Hospital. At the county level, health expenditure relating to all parts of the health structure was identified.

An analysis of the ways in which various parts of the health system are financed sheds light on policies aimed at meeting the health needs of all, however poor, and on other economic factors encouraging or restricting the use of particular health services. Estimating the proportion of income devoted to health may also be helpful in making judgements about the affordability of existing services, commitment to financing recurrent costs, and the financial viability of improving services. This is important in China where, as health conditions continue to improve, a change in the pattern of disease and quality of care is to be expected, and costs are likely to increase, as has happened in other countries. The Xiao Han Brigade and the Xu Jia Commune of which it is part were selected for analysis. The following assessment focuses mainly on expenditure on health functions carried out in the three-level network system, with special attention to the implications for the members of the Xiao Han Brigade. The effective expenditure at each level does not reflect the total costs of the health services enjoyed by the community concerned, mainly because of contributions from higher levels of government. A rough breakdown of the financial burden for health care at various levels, taking into account subsidies and other support from the national, provincial, and prefectural governments, has therefore been made. These cost data may be employed *inter alia* to illustrate the extent to which decision-making is decentralized in the Chinese health system and also to illustrate an important aspect of the people's involvement in the management of health services.

[1] Based on the report of Team 4, consisting of Dr J. L. Harney (Barbados), Dr A. Nondasuta (Thailand), and Dr F. Spooner (Vanuatu).

Limitations of the data

Certain limitations of the data must be stressed.

1. The wide variations in economic circumstances between the country's provinces, and even within communes, mean that generalizations based upon the experience of the selected brigade, commune, and county must be made with extreme caution. The general approach should, however, be valid, since the system operates in a reasonably uniform way throughout the country.

2. Because of the largely State-administered price system, the interpretation of costs is a complex matter. In particular, international comparisons of the absolute costs of health care should not be made.

3. As in all countries, the definitions of health care and expenditure are ambiguous. Many factors contribute to improvements in health, such as education, housing, and nutrition. Moreover, many other government agencies and communities are involved in the Patriotic Health Campaigns.

4. The data presented in this section also exclude health services provided by industry and the army.

Xiao Han Brigade

Xiao Han Brigade has a population of 1641, 422 households, and a full-time labour force of 845. It consists of seven agricultural production teams. Most workers are employed in agriculture, but the Brigade is atypical in the extent to which collective "sidelines" (not to be confused with private family activities) predominate in terms of financial return. In particular, in 1981 lime production accounted for 60% of the Brigade's collective income.[1]

Table 2 gives a breakdown of the finances of the Xiao Han Brigade. The estimated gross income from the Brigade's collective activities (or their output value) in 1981 was ¥1 117 857,[2] of which 20.19% was from the sale of agricultural products and 79.81% from collective "sidelines". The expenditure and disposal of the income are indicated in Table 2 (items II–IV).

In effect, the net income of the Brigade (item VI) as a collectivity consists of the sum of items IV and V. The Reserve Fund representing 19.38% of the total collective income (IV) is maintained for the purchase of capital equipment for the Brigade's production activities, while the welfare fund representing 1.27% of the total collective income (IV) is used for educational, health, cultural, and other public functions. Both funds may be used to protect the Brigade from drops in income such as those resulting from poor harvests, thereby permitting flexibility in the allocation of resources and disposal of income. Both funds represent 20.65% of the total collective income. Cash and values in kind distributed to individuals, i.e., distributed collective income, represents close to 80% of the total collective income. Its

[1] For the communities and health services studied in the Seminar, see the Annex.

[2] The current exchange rate is about ¥1.9 to US$1.0.

Table 2. Financing of Xiao Han Brigade (Xu Jia People's Commune), 1981

I. Value of production outputs			
— Brigade's and team's agricultural produce		¥225 714	
— Brigade's and team's non-agricultural produce		¥892 143	
			1 117 857
II. Operating costs of production			¥638 498
III. Government tax			¥24 849
IV. Total collective income (I − (II + III))			¥454 510
of which:			
(*a*) Income retained for funds			
Reserve	¥88 083		
Welfare	¥5 772		
			¥93 855
(*b*) Distributed collective income			
In cash	¥224 655		
In kind	¥136 000		
			¥360 655
V. Estimated family "sideline" net income			¥150 000
VI. Net income of brigade (IV + V)			¥604 510
VII. Net income of brigade members (IV(b) + V)			¥510 655

distribution is organized according to the normal planning procedure in China, whereby a committee consisting of brigade and production team members estimates the expected yields and revenues from the next harvest, capital requirements and needs in operating equipment and supplies, what, if anything, can be expected from the commune in cash and kind for capital expenditure, and the anticipated public needs as regards education, health, nightsoil collection, etc. The amount of income that is likely to be distributed is estimated, jobs and individuals to do them are classified, and a system of work-points reflecting the nature of the tasks involved is determined. The profits made by the Brigade are distributed twice yearly, i.e., just before each harvest season and at its conclusion. In 1981, distributed collective income, plus the amounts set aside for the reserve and welfare funds, amounted to ¥454 510, or ¥277 *per capita*.

Further income is available as a result of private economic activity (family "sidelines"). Most families own pigs, chickens, or goats, and many operate small-scale cottage industries. They sell their produce both to the Government and privately. The estimated net income of the Xiao Han Brigade from family "sidelines" was ¥150 000. The Brigade's total net income (collective and family) in 1981 in terms of *per capita* income was therefore estimated at ¥368. The proportion of net income generated by private "sidelines"—very close to 30% in 1981—has dramatically increased in the last three years.

Cooperative Medical Care Insurance Scheme (CMCIS)

In addition to the Brigade's Welfare Fund, from which direct transfers are made, the main source of finance for health care at the brigade level is the

Table 3. Financing of Cooperative Medical Care Insurance Scheme (CMCIS), Xiao Han Brigade

I. *Contributions*
- — Contributions from the Brigade's welfare fund
  ¥1.20 per member (both workers and dependants)
- — Contributions from the production team
  ¥0.40 per member (both workers and dependants)
- — Direct contributions from individuals
  ¥0.40 per member (both workers and dependants)

II. *Insurance coverage*
- — 100% of cost of services provided at the Brigade Health Station
- — 50% of cost of drugs obtained at the Brigade Health Station
- — 50% of cost of services and drugs provided at higher levels of the three-level network (Commune Health Centre, County Hospital, etc.), reimbursed only when referral is made[a]
- — 50% of cost of services and drugs provided at levels beyond the three-level network, reimbursed only when referral from below is made[a]

III. *Form of payment*
- — Contributions are collected in June and November each year (i.e., at the time when income is distributed to Brigade members)
- — Payment of 50% of cost of drugs is not actually made in cash. Note is taken of the total amount of drugs prescribed, and 50% of the value is deducted at the time when the collective income is distributed
- — Payment of 100% of cost of drugs and services at higher levels is made in cash by the insured individual. Reimbursement is claimed afterwards

[a] Exceptions are made in cases of emergency.

Cooperative Medical Care Insurance Scheme (CMCIS). The precise machinery and the size of the contributions vary between brigades. In Xiao Han, ¥2 per member (both workers and dependents) is placed in the CMCIS: ¥1.2 by the Brigade, ¥0.4 by the Production Team, and ¥0.4 by the member himself (see Table 3).

In some brigades there is no levy at all on the individual; in others the whole premium is paid directly by the individual. As far as affordability and strictly financial criteria are concerned, these variations are insignificant; the only difference is that an individual's appreciation of the cost of health care and of his own contribution to it may be somewhat clearer if contributions to the CMCIS are separately identified. Even this advantage, however, is diminished to some extent in that the Brigade population appears to be generally well informed about its total expenditure and the distribution of this expenditure among different functions.

The CMCIS has the advantage of pooling of risk. But because of the small number of people involved, and because health is a relatively large item of discretionary expenditure for the Brigade, the system also enjoys some of the advantages of a system of beneficiary charges, in which individuals can indicate satisfaction or dissatisfaction with the quantity and quality of the services they get for their money, and bring moral pressure to bear on those members felt to be abusing the system. Insurance contributions are collected

in June and November, i.e. at the times when income is distributed to brigade members.

The insurance covers health care services provided at the Brigade Health Station, the Commune Health Centre, and the County Hospital and also beyond the three-level network when necessary. The scheme in Xiao Han covers 50% of the costs of medicaments obtained at the Brigade Health Station, the services of the barefoot doctors being provided at no cost to the patient. Patients do not actually pay cash for medicaments; note is taken of the amount prescribed and 50% of the value is deducted when the collective income is distributed.

Brigade members pay for services rendered at higher levels and are subsequently reimbursed for 50% of all costs—both services and medicaments. When, because of the exceptionally high cost of treatment or because of poverty, an individual cannot afford to pay his contribution, and the CMCIS itself cannot cover it, efforts are made to compensate for this at various government levels. Contributions to CMCIS therefore may or may not accurately reflect the sums needed for reimbursement. Except in cases of emergency, referral from below is usually a condition of reimbursement; this helps to control costs, particularly as the barefoot doctor is himself a member of the local insurance scheme.

Cooperative Medical Health Station

In Xiao Han Brigade, there is one Cooperative Medical Health Station, with three barefoot doctors who, in 1981, in addition to their preventive and educational functions, handled 11 094 clinical consultations, 911 vaccinations, 550 check-ups, and 20 deliveries. They are assisted by unpaid health aides/midwives. The barefoot doctors work full time on health (but they have to participate in normal productive work for part of each year). They are paid as though they work in agriculture, plus an extra 10%. The Brigade continues to pay their salaries and expenses while they are undergoing in-service training at higher levels.

Sources of income and expenditure for the Xiao Han Brigade Cooperative Medical Health Station are shown in Table 4; it is important to note that the Brigade sold services and drugs to other brigades to the value of ¥3168; assuming these sales were at cost price, then the net annual expenditure on health as perceived by the Xiao Han Brigade itself amounted to ¥5456 or ¥3.3 *per capita*. This is less than 1% of the Brigade's *per capita* income. However, the figure does not reflect the total cost of health care at brigade level to the economy as a whole, since several of the Brigade's activities are in fact financed from other sources: for example, the training of barefoot doctors, particularly at the county level, is subsidized, and various essential supporting services at higher levels are provided at no cost to the Brigade. The value of the family planning supplies and vaccines (which are provided free of charge by the State) is estimated at ¥0.20 *per capita*, the remaining costs being included in the costs at higher levels, which will be discussed farther on.

Table 4. Financing of Xiao Han Cooperative Medical Health Station, 1981

A. INCOME		
I. From high levels (value of vaccines and family planning supplies in kind)	¥328	
II. Contribution from Cooperative Medical Care Insurance Scheme (CMCIS)	¥3358	
III. Contribution from Brigade's welfare fund	¥2610	
IV. Direct payments by individuals	¥1713	
V. Sale of services and drugs to other brigades	¥3168	
VI. Construction costs (not in cash)	¥260	
		¥11 437
B. EXPENDITURE		
I. Salaries and bonuses	¥1260	
II. Purchase of drugs	¥5426	
III. Maintenance	¥300	
IV. Equipment and materials (in cash ¥1000) (in kind ¥328)	¥1328	
V. Others	¥50	
VI. Construction (not in cash)	¥260	
		¥8 264[a]
C. BALANCE FOR 1982		+¥2 813

[a] Minus value of drugs sold to other brigades (¥3168) making total expenditure to a value of ¥5456.

Xu Jia Commune

In 1981 Xu Jia Commune had a population of 35 864 with 45 brigades, including Xiao Han. Most of the people are employed in agriculture but, as in the case of Xiao Han Brigade, the "sideline" activities of brigades and teams bring in more income. Commune enterprises, however, also make a significant contribution.[1]

Table 5 gives a breakdown of the financial situation at the Xu Jia Commune in 1981. The estimated gross income (or output value) of the Commune's collective activities in 1981 was ¥21 380 000 of which 31.81% was from the sale of agricultural produce, 39.38% from the sale of non-agricultural produce, and 28.44% from collective "sidelines" (once again not to be confused with private family activities). Expenditure and disposal of the income are indicated under items II–IV.

The net income of the Commune (item VI) as a collectivity consists of the sum of items IV and V. At this level there are also the reserve and welfare funds of the commune enterprises and some minor funds classified in the table as "Other". Reserve funds represent 25.26% of the total collective income (IV) and welfare funds 5.32%. The amount retained for funds is

[1] For the communities and health services studied at the Seminar, see the Annex.

Table 5. Financing of Xu Jia People's Commune, 1981

I. Value of production outputs:		
— Brigades' and teams' agricultural produce	¥6 800 000	
— Brigades' and teams' non-agricultural activities	¥8 420 000	
— Commune enterprises and collective "sideline" activities	¥6 080 000	
		¥21 380 000
II. Operating costs of production activities		¥11 629 000
III. Government tax:		
— Government tax on brigades and teams	¥310 000	
— Government tax on commune enterprises	¥134 000	¥444 000
IV. Total collective income of which: (I − (II + III))		¥9 307 000
(*a*) Income retained for funds:		
— Reserve funds of brigades and teams	¥1 765 000	
— Reserve funds of commune enterprises	¥586 000	
— Welfare funds of brigades and teams	¥244 000	
— Welfare funds of commune enterprises	¥251 000	
— Other funds	¥11 000	
		¥2 857 000
(*b*) Distributed collective income:		
— In cash	¥3 590 000	
— In kind	¥2 860 000	
		¥6 450 000
V. Estimated "family sideline" net income		¥2 400 000
VI. Net income of commune (IV + V)		¥11 707 000
VII. Net income of commune members (IV(b) + V)		¥8 850 000

proportionately higher in relation to total collective income at the Xu Jia Commune than at the Xiao Han Brigade (30.70% as compared with 20.65%).

Distributions in cash or kind to individuals, i.e., distributed collective income, represent close to 70% of the total collective income. In 1981 distributed collective income, plus the amounts set aside for reserve, welfare, and other funds, amounted to ¥9 307 000, or ¥260 *per capita* (lower than the Xiao Han Brigade's ¥277 *per capita*). The estimated net income of the Xu Jia Commune from family "sidelines" in 1981 was ¥2 400 000. The Commune's total net income (collective plus family) in 1981 in terms of *per capita* income was estimated at ¥326 (lower than the Xiao Han Brigade's ¥368 *per capita*). The proportion of net income generated by private "sidelines' was a little over 20% (lower than the Xiao Han Brigade's 30%).

Commune Health Centre

In Xu Jia People's Commune there is a Commune Health Centre with 15 beds and a staff totalling 26 (including 3 physicians trained in western medicine, one traditional Chinese doctor, 5 middle-grade physicians trained in western medicine, 3 assistant nurses, 1 midwife, 8 technicians, and 5 other administrative and general service staff members). In 1981 the Centre provided 43 895 outpatient consultations and had 328 inpatients with an average length of stay of 6.4 days, representing a bed-occupancy rate of 38%.

Table 6. Financing of Xu Jia Commune Health Centre, 1981

A. INCOME		
I. Allocation from county		
— fixed amount for 60% of salaries and some equipment	¥20 000	
— material and equipment in kind (estimated value)	¥11 624	
II. Direct payments from individuals (for services and drugs)	¥75 100	
III. Sale of drugs	¥2600	
IV. Sale of waste material	¥200	
V. Construction costs (not in cash)	¥10 000	
		¥119 524
B. EXPENDITURE		
I. Salaries and bonuses	¥22 500	
II. Purchase of drugs	¥49 500	
(western: ¥41 800)		
(traditional: ¥7700)		
III. Maintenance	¥7700	
IV. Equipment and materials	¥14 324	
(in cash: ¥2700)		
(in kind: ¥11 624)		
V. Supplies and others	¥15 400	
VI. Training	¥500	
VII. Construction (not in cash)	¥10 000	
		¥119 924
C. BALANCE FOR 1982		−¥400

All 328 inpatients were referred from brigades, and 24 of them were referred by the Health Centre to higher-level health services (7 to the County Hospital). In addition to their health care activities at the Centre, staff members visit brigade health stations.

Income and expenditure for the Xu Jia Commune Health Centre are shown in Table 6. It is important to note that 60% of staff salaries are paid out of allocations from Yexian County. The total allocation from the County (including money for equipment and material and equipment in kind) represents 26.46% of the income of the Health Centre, while direct payments from individuals for services and drugs represent 62.83%. Sales of drugs are relatively limited.

In 1981 the Commune Health Centre made a slight loss (¥400), but balances can be carried over from year to year. In fact, there was a positive balance of ¥32 900 from the 1980 financial year so that there was a positive balance of ¥32 500 at the beginning of the 1982 financial year.

Expenditure at the Xu Jia Commune Health Centre is equivalent to about ¥3.35 per commune member (very close to the ¥3.32 for the Xiao Han Brigade Health Station). Once again, the average expenditure *per capita* at the Commune Health Centre may not accurately reflect the costs at commune level that should be attributed to any particular brigade. For example, members of Xiao Han Brigade appear to have been responsible for only 2% of total payments for treatment at the Commune Health Centre. On

this basis, the cost of the Commune Health Centre attributable to Xiao Han Brigade members would be about ¥1.32 *per capita*. The relatively small use of the Commune Health Centre may be explained by a number of factors; e.g., the Brigade has a very popular traditional practitioner and, as noted, provides services for substantial numbers of people from other brigades. Also brigades located closer to the Centre might be expected to make relatively greater use of it, even though the Centre is no more than 35 minutes by bicycle from the remotest brigade and is therefore accessible to all.

Yexian County

The main health agencies and services operating at the county level and their recurrent and "adjusted" capital expenditure for 1981 are shown in Table 7. Expenditure on the County Hospital represents more than 80% of the total health expenditure at the county level. On the other hand, expenditure on the administration of the County Health Bureau was only 1.34% of the total.

The average cost of health services provided at the county level is estimated to be ¥1.79 *per capita*. However, these services are not distributed equally across the County. Information on referrals suggests that only a quarter of hospital costs should be allocated to the brigades, because the bulk of the patients are apparently government or factory employees or residents of Yexian Town. If hospital costs are allocated on the basis of the above information, and all other costs, such as those of the Epidemic Prevention Station are allocated on a straight *per capita* basis, the allocation for the Xiao Han Brigade would be ¥0.69 *per capita*. But the importance of the technical support activities at county level should not be overlooked. Although expenditure is relatively small, it appears that about 42% of the time of health

Table 7. Health expenditure, Yexian County, 1981

	Expenditure (Yuan)
I. County Hospital	1 206 400 [a]
II. "Middle" Medical School	67 900[a]
III. Epidemic Prevention Station	91 300
IV. Maternal and Child Health Station	14 000
V. Traditional Orthopaedic Hospital	23 000
VI. Drug Control Laboratory	5800
VII. Skin Disease Prevention Station	13 000
VIII. Services for special groups (e.g., veterans) and health education	52 000
IX. Health Bureau administration	20 000
	1 493 400

[a] This figure has been adjusted on the basis of three years' average expenditure for construction and maintenance.

staff at the county level is devoted to the direct support work at the commune and brigade levels, largely through non-hospital activities.

People's County Hospital

The Yexian People's County Hospital has 186 beds and a staff totalling 229 (including 44 physicians trained in western medicine, 1 traditional Chinese doctor, 11 middle-grade doctors, 52 nurses, and other professional staff members). In 1981 the hospital handled 200 858 outpatient consultations and visits and had 4904 inpatients. It attended to 669 deliveries, out of which 390, or 58.30%, were referred from the commune and brigade levels. No deliveries were referred to upper levels in spite of 289 dystocia cases.

Income and expenditure for the Yexian County Hospital in 1981 are shown in Table 8. The year was a rather exceptional one as regards

Table 8. Financing of Yexian People's County Hospital, 1981

A. INCOME		
I. Allocations from higher levels:		
— From Provincial Government for construction	¥ 150 000[a]	
— From Prefecture for construction	¥ 150 000[a]	
II. Allocations from county government		
— For construction and renovation	¥ 270 000[a]	
— For salaries and equipment	¥ 206 000	
III. Direct payments from individuals (for services and drugs)	¥ 586 800	
IV. Sale of drugs (to communes and factories)	¥ 30 300	
V. Ambulance service fees and others	¥ 9736	
VI. Training fees (from communes)	¥ 864	
		¥ 1 403 700
B. EXPENDITURE		
I. Salaries and bonuses	¥ 175 600	
II. Purchase of drugs		
(western: ¥ 299 300)		
(traditional: ¥ 20 300)		
	¥ 319 600	
III. Construction	¥ 550 000[b]	
IV. Maintenance	¥ 20 000	
V. Equipment and supplies		
(equipment ¥ 112 000)		
(expendable supplies ¥ 126 600)		
(services (electricity, telephone etc.) ¥ 13 900)		
	¥ 252 500	
VI. Payments of staff insurance	¥ 18 800	
VII. Training fees	¥ 2900	
		¥ 1 339 400[b]
C. BALANCE FOR 1982		+ ¥ 64 300

[a] Extraordinary allocations for capital construction.

[b] Based on average annual construction costs over the last three years a more representative figure would be ¥ 417 000. Therefore the total expenditure would be ¥ 1 206 400.

allocations from higher levels for construction and renovation. This has to be taken into consideration when relative figures are analysed. Otherwise the adjusted figures show that allocations from higher levels and from the county government account for almost 50% of the total income, while direct payment from individuals represents 47%.

Leaving aside construction and equipment (which in 1981 represented 49.43% of total expenditure), the most costly items were: purchase of drugs (41.11%), salaries and bonuses (22.59%), and expendable supplies (14.41%). It has to be noted that, with the exception of very special diets, hospitals in China do not provide meals.

Higher levels

Higher levels contribute to the three-level system in a number of ways, including passing on subsidies in the form of capital grants, equipment and supplies, vaccines, and family planning items. These have been taken into account in the preceding calculations. In addition, advisory, research, preventive, and curative activities, many of them of benefit to lower levels, are conducted at higher levels. Very rough estimates have been based on the assumption that, apart from expenditure on hospitals,[1] all costs can be allocated to the members of Xiao Han Brigade on a straight *per capita* basis. Thus, at Yentai Prefecture level, health service costs amount to about ¥10 300 000, of which about 70% is on hospitals. Over the prefectural population as a whole, the *per capita* expenditure is about ¥1.21, but when non-hospital costs only are allocated to the Brigade, it amounts to no more than ¥0.36 (Table 9).

Some significant conclusions

The degree of decentralization is such that over 80% of health expenditure occurs within the three-level network system, and 65% at the commune level and below. This is not to underestimate the importance of the technical advisory functions at higher levels; as noted elsewhere, these are extremely important, but they are not matched by correspondingly large facilities and expenditure.

The health budget at State, province, prefecture, or county level is not necessarily spent at the level indicated. For example, out of the total recurrent budget at the State level, only 4.75% is spent on facilities actually operated at the State level (e.g., research institutions and a small number of specialized and teaching hospitals). Roughly 50% goes on subsidies to

(*continued on page 70*)

[1] Expenditure on higher medical education, administered primarily by the Ministry of Education, should in principle be included but data were not available. The costs of hospitals affiliated to the medical schools, which do come under the Ministry of Public Health, are, however, included.

Table 9. Health budgets and expenditure at various levels, 1981 (excluding services specifically for government and industrial employees and the Army)

Level	Recurrent budget for health (Yuan) (1)	Recurrent expenditure at each level[a] (Yuan) (2)	Percentage of recurrent expenditure made at each level (2) × 100 / (1) (Yuan) (3)	Capital expenditure at each level (Yuan) (4)	Population (5)	Simple average *per capita* expenditure (6) = (2) + (4) / (5) (Yuan) (6)	Monetary value of services benefiting Xiao Han (Yuan) (7)
State	3 273 760 000	155 547 000	4.75%	—[b]	982 500 000	0.16[c]	—[d]
Shandong Province	210 000 000	19 790 000	9.42%	8 585 000[e]	73 900 000	0.38	0.14
Yantai Prefecture	33 088 000	7 715 000	23.32%	2 580 000[e]	8 500 000	1.21	0.36
Yexian County	1 996 000	1 060 000	53.13%	433 000[e]	833 863	1.79	0.69
Xu Jia Commune	120 000	120 000	100%	—[f]	35 864	3.35	1.32
Xiao Han Brigade	5456	5456	100%	—[f]	1641	3.32	3.32
					Total	10.21	5.83

[a] Excludes equipment and supplies passed on to lower levels.
[b] Not available.
[c] Relates only to recurrent expenditure.
[d] Assumed to be negligible.
[e] Averaged over 3 years.
[f] Included in column 2.

Explanatory notes to Table 9

Column 1: This is the total recurrent budget for health available at each level of government and collectivity, regardless of the sources of the funds.

Column 2: These are the amounts actually *spent* on recurrent items at each level of government and collectivity. They exclude funds and materials and supplies passed on to lower levels.

Column 3: This is the percentage of recurrent expenditure in relation to the respective recurrent budget for health, at each level.

Column 4: These are average annual capital expenditures during the last 3 years and are assumed to be representative of the annual capital costs.

Column 5: Population for 1981, according to official information for each government jurisdiction or collective unit.

Column 6: This is equal to recurrent expenditure plus capital expenditure (i.e., total expenditure) at each level divided by the population of each government jurisdiction or collective unit.

Column 7: This is the monetary value *per capita* of the health services received directly or indirectly by Xiao Han Brigade from each level of government and collectivity. The measure of the monetary value of these services is the amount of money that was spent on them at each level. The differences between each level in this column are *not* due to differences in *per capita* costs of health services at each level. They are due primarily to the numbers of people in Xiao Han Brigade which received health services from each level. Thus, for example, the Brigade received ¥ 1.32 of services *per capita*

from the Commune Health Centre, though the average amount of services *per capita* received by all the members of the commune was ¥3.35. This was apparently because members of Xiao Han Brigade made less than average use of the Commune Health Centre's facilities. Similar types of assumption, as noted above, were made to attribute the benefits of expenditure at county, prefecture, province, and State levels to the members of Xiao Han Brigade.

The difference between columns (6) and (7) suggests that Xiao Han Brigade received fewer services *per capita* from each level of government and from its commune than the *per capita* average for the county as a whole.

The figures in Column (7) were derived as follows:

At the brigade level, the figure of ¥3.32 in Column (7) is the same as in Column (6) because all expenditure at brigade level benefited only the Brigade members.

At the commune level, the figure of ¥1.32 was obtained from brigade data showing the total amount of reimbursement from the insurance for drugs and services provided by the Commune Health Centre to members of the Xiao Han Brigade. This reimbursement (¥675) amounted, after adding an equivalent amount paid by the Brigade members) to about 2% of the total value of drugs and services sold to commune members by the Commune Health Centre. It was therefore assumed that the Xiao Han Brigade received about 2% of the value of all the other health services provided by the Commune Health Centre, which works out at ¥1.32 *per capita*. (This may be an understatement to the extent that people bypass the referral system and therefore do not qualify for insurance.)

At the county level, data were obtained on the number of referrals to the County Hospital from brigades and communes as a proportion of the total number of patients handled by the hospital; this came to approximately 25%. This percentage was then applied to the total expenditure by the hospital. For the other health services provided at the county level, a straight *per capita* expenditure for the county population (rather than 25% of average *per capita* expenditure) was assumed because there was no evidence for believing that the Xiao Han Brigade received significantly fewer of these non-hospital services on a *per capita* basis than the rest of the county, since services such as training and antiepidemic facilities were not provided to individual patients, but to the Brigade as a whole.

At the Yentai Prefecture level, hospitals account for about 70% of total health expenditure. It appears that members of the Xiao Han Brigade did not use the services of the Prefecture Hospital during 1981. For the remaining 30% of the expenditure, it was assumed that the members of the Xiao Han Brigade received the average value *per capita* of non-hospital services, which amounted to ¥0.36.

At the Shangdong Province level, a breakdown of health expenditure was unavailable, and it was assumed that 70% of health expenditure was on hospitals as in the case of the prefectural level. Since it appears that members of the Xiao Han Brigade did not use the Provincial Hospitals, the same procedure was applied to non-hospital expenditure as at the prefectural level by taking the *per capita* average for the entire province, which amounted to ¥0.14.

At the State level, the health services benefiting Xiao Han Brigade are assumed to be negligible.

. . .

hospitals, Maternal and Child Health Stations, Epidemic Prevention Stations, and other facilities through the Public Health Bureaux at the appropriate provincial, prefectural, or county levels and as subsidies for salaries at the commune level. The remainder is spent on municipal health functions. Similarly, out of the total recurrent health budget for Yexian County, only 53.13% represents expenditure at the county level itself, the remainder being used to subsidize communes (i.e., mainly for the salaries of Commune Health Centre workers). In between these two levels, the figures for Shandong Province and Yentai Prefecture are 9.42% and 23.32%, respectively (see Table 9).

The affordability of health care is illustrated by the fact that the *per capita* cost of the health services provided to the people of Xiao Han Brigade is estimated to be ¥5.83, which is equivalent to only 1.5% of the *per capita* product of the Brigade. This does not mean that households spent 1.5% of their incomes on health care, but rather that the total expenditure on health care, regardless of where it was delivered or who paid for it, amounted to that proportion of the value of the Brigade's total production. In fact, Brigade members paid only about ¥3.9 *per capita* for health services, the remainder being financed from above. This means that the *per capita* direct expenditure for health care in Xiao Han Brigade is equivalent to only 1% of the *per capita* product of the Brigade.

In addition to affordability and local involvement in decision-making, the division of responsibility among the different levels for financing health care services for the Xiao Han population and the financing methods used appear to be based on the following criteria: national interest, economic efficiency, equity, social acceptability, and fiscal/administrative feasibility. The criterion of the national interest is predominant in the family planning and immunization services where the interest of the individual or family may not precisely coincide with national goals. For example, it may be in the interest of an individual family to have three or four children to enlarge the family's income and to provide security for the parents in their old age. But families of this size may not be in the national interest. To overcome any reluctance by individuals to use the services, they are provided free of charge and financed entirely by the State. Actual supplies are passed on down through the system at no cost to the successive administrative levels, so there is no incentive at any level in the structure to economize by not making use of them. When the need for economic efficiency or the avoidance of waste is a major consideration, as in the prescription and use of medicaments, the cost of the medicaments is recovered from the families using them by means of direct and indirect charges at the brigade, commune, and county levels.

The organization and administration of the Cooperative Medical Care Insurance Scheme at the brigade level help to keep down costs for families by discouraging the unnecessary use of health services. The excessive use of medicaments and of facilities at higher levels would necessitate higher premiums and/or the allocation of more money for health services from the Brigade's welfare fund. Either of these would be considered undesirable by Brigade members. Thus, close vigilance by the community over the operation

of the insurance scheme, which is made possible by the administration and control of the scheme at the brigade level, has a restraining influence on the excessive use of health care services. Furthermore, day-to-day control and close scrutiny of the health care system at the grassroots level help to sustain its acceptability to the beneficiaries, and therefore also to ensure a relatively stable flow of revenue into the system. This is a major factor in determining the system's administrative feasibility.

For China as a whole, excluding the State Medical Care System for Government employees, and the labour insurance scheme, health expenditure channelled through the Ministry of Public Health, supplemented by various adminstrative levels and the collectives, is about ¥10 *per capita*. About 60% of this expenditure is on medicaments, particularly of the western type, some ¥6 *per capita* being spent by or on behalf of the members of Xiao Han Brigade. If this statistic is representative, it suggests that, even in China, inequalities between those living in urban and more remote areas remain. State expenditure on medical care for government employees and the medical care scheme for industrial employees (in the latter case, the scheme primarily finances the salaries of health care personnel) are ¥660 million and ¥4440 million respectively. This adds at least ¥5 to *per capita* health expenditure for the country as a whole, and implies a *per capita* expenditure of about ¥25 for members of the government/industrial worker group, excluding contributions from the industries themselves. This suggests a further bias in favour of urban populations, particularly since the insurance schemes are very heavily subsidized.

4. Conclusions of the Seminar

General Observations

The seminar whole-heartedly endorsed the unanimous decision of the Member States of WHO that the main social target of their governments and people and that of the international organizations and the whole world community should be the attainment by all peoples by the year 2000 of a level of health that will permit them to live socially and economically productive lives. The seminar also endorsed the view that primary health care is the key to attaining this target as part of development in the spirit of social justice.

In considering the lessons to be drawn by other countries from experience of primary health care in China, the seminar reiterated the definition in the Declaration of Alma-Ata to the effect that primary health care is "essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination".[1]

The seminar realized, however, that the implementation of primary health care has proved a difficult task. Even when the concept of primary health care is clearly understood, confusion has arisen when it comes to applying its principles in actual country situations. There are many obstacles to be overcome in the political, technical, and managerial processes involved in the implementation of primary health care and through it the achievement of the social target of "health for all by the year 2000".

Among the countries of the world, one in particular—namely China, where almost a quarter of the world's population lives—has strikingly demonstrated how "health for all" can be achieved. During the exploration by the seminar of the four selected issues, through field work, direct observation, and intensive talks with the relevant health workers, and also during the discussions between the senior health administrators and the ministers and presidential advisers, a fundamental question was always

[1] *Alma-Ata 1978. Primary health care*. Geneva, World Health Organization, 1978, p. 3 ("Health for All" Series, No. 1).

present: what factors have contributed to the current high level of primary health care in China? Besides the many conclusions reached in respect of each of the four specific issues explored, some general factors emerged as having made a significant contribution.

1. China has demonstrated a tremendous political commitment to the task of changing the quality of life of all its people and especially of the rural population. Health goals have been given very high priority. This political commitment permeates all levels of government and all social and mass organizations ensuring sustained popular support.

2. The reorganization of the country's economic and social structure, and in particular the high level of decentralization, has permitted the integration of the health sector with all aspects of economic and social development and has facilitated the people's involvement in the financing as well as the management of health care.

3. Concerted action in many sectors has contributed to raising the level of health of the people. Sufficient increase in income and its equitable distribution to permit minimally adequate shelter, clothing and, above all, essential food at affordable prices, the expansion of literacy and mass education (particularly primary education), the provision of public services such as water supplies and transport, the policies and programmes related to family planning, etc., have all contributed to this improvement in health status.

4. Perhaps the most important factor in the development of the health care system has been the participation of the people in the provision of health services, in the management of the system, and in mass campaigns. The people have contributed to the integration and better coordination of health programmes and to intersectoral collaboration at all levels.

5. Every step in the development of the Chinese health care system in the past—starting with mass mobilization for prevention, followed by the development of cooperative health centres, the emergence of the "barefoot doctor", the combined use of traditional Chinese medicine and western medicine, the development of the commune and brigade network with its cooperative medical insurance schemes and of the whole supportive health care network at higher levels, etc.—is a concrete and living expression of what constitutes appropriate technology.

Experience in China, therefore, shows all the principles of primary health care in operation. By studying it, a clearer idea can be gained of what primary health care is, and what it is not. For example, the participation of the people is not simply the contribution of community resources to a health system managed by professionals; nor is primary health care a matter of providing for community health workers with inadequate training, isolated from the rest of the health care system, unsupported and unremunerated by the people they serve. It is not an inferior system of health care, but rather a total system permitting all people to have access to the level of care they require at a cost that is within the means of the country and the individuals concerned. Finally, it is not a "programme" to be implemented in isolation either from other technical programmes in the health system or from other sectors outside the health system.

During the two weeks of the seminar, a set of conclusions was gradually developed. As a result of the explorations of the senior health administrators and their reports and submissions to the ministers and presidential advisers present, as well as of the discussions and field visits during the second week, the following conclusions, based on experience in China, are presented. They are by no means novel in terms of health doctrine or ways and means of attaining health for all and effectively implementing the primary health care approach. However, these conclusions have the special advantage of being based on a practical countrywide exercise carried out over a considerable period of time, in the course of which many obstacles were overcome despite the limited and conventional nature of the resources available.

Considering that "health for all" is in effect a changing target in that, once a desired level of health status has been attained, sights are raised and a much higher level is aimed at, it would be wise to continue progress in a way that does not lead the country into another trap—that of excessive medical consumption.

Primary Health Care and the Health Care System

1. As the key to achieving "health for all by the year 2000", primary health care in the form of permanent activities and campaigns to tackle health problems is initiated at the first level of contact between the people and the health system, with the full support and involvement of the community. However, the primary health care approach should apply to all levels of a country's health system and not just to the services on the periphery. On the other hand, primary health care should be an integral part of the overall national and local socioeconomic development. It has to be planned in coordination with other sectors and implemented through the organized systems and mechanisms for national and community development. Primary health care should therefore *not* be planned and implemented as a vertical programme in parallel with, and independent of, the rest of the health care system.

2. The whole health care system should be oriented mainly to providing support to the peripheral services and to complementing their action by means of easy and timely channels of referral for cases or problems beyond their competence. This is the only way to render all levels of the health care system accessible to all people.

3. At the same time, the health care system should be compatible with the country's political, administrative, and production patterns as well as the socioeconomic structure that has been set up for overall development. This will facilitate both the proper integration of primary health care into the developmental process at national and local levels and cooperation with other social and economic sectors.

4. The health care system should be built up in the light of the available national resources so that it can evolve in a sustainable manner based on the principles of self-reliance and self-determination. Sufficient flexibility

should exist to allow the health care system to adapt itself to local problems, natural conditions, and available resources, as well as to changing situations.

5. So that the health care system can mobilize local resources and ensure that they are being used in a manner consistent with local problems and priorities, there is a need for effective decentralization of political and economic power. This has to be initiated by national policies, supported by the necessary legislation or equivalent instruments and implemented by strategies that:

(*a*) ensure that resources generated locally are used to build up and maintain, to the maximum degree possible, local health services;

(*b*) allocate government resources to subsidize local health services when the communities concerned lack sufficient resources, thus putting social solidarity into practice by overcoming gross regional and local disparities.

Where decentralization policies in health are not consistent with national administrative policies, the health sector should take a lead in encouraging governments to adopt decentralization policies in the context of socio-economic development, if necessary, by initiating the process in the health sector itself.

6. Primary health care activities not only should be curative in nature (although this may meet the medical needs of the people), but should range from the promotive through the preventive to the curative and rehabilitative, with referrals to higher levels, where necessary, to make such a wide range of activities possible. They should deal with the main health problems affecting the social and physical environments and include such programmes as the provision and improvement of water supply and basic sanitation, the promotion of food supply and proper nutrition, etc., to be undertaken in coordination with the relevant sectors.

7. To provide support for primary health care, programmes under the responsibility of the health care system should be properly coordinated at the central level. Nearer the periphery, coordination should turn into integration. At the community level all programmes should be integrated as part of the community's programme of socioeconomic development.

8. The primary health care system requires the peripheral services to be actively supported by intermediate ones; the front-line hospital has a particularly important role to play in this regard. Support must include technical supervision and guidance, programmes for continuing training, and the provision of necessary supplies and equipment. Of paramount importance, as noted earlier, is the availability of a system of referral ensuring access to more highly trained staff capable of dealing with a progressively wider range of specialized health interventions that require more sophisticated technology than can be provided at the community level. Ease of access to the higher levels enhances the value to the community of the health care locally available.

9. In order to achieve total population coverage and the goal of "health for all by the year 2000", priority should be given to underserved areas and to high-risk groups in the population. While the emphasis is on total coverage,

the support of the progressively more sophisticated higher levels of the health system, as stated earlier, ensures that health care of the very highest quality is made available and accessible to all, when needed. Thus a balance is struck between quality and quantity. However, as total coverage is achieved, further improvement of the quality of care at all levels is to be expected.

The People's Involvement in and Management of Health Care

1. There can be no doubt that the most important factor in the successful implementation of the primary health care approach is the involvement of the people. Only through individual and community involvement in the planning, organization, operation, financing, and control of health care, will primary health care become a "way of life" and will "health for all by the year 2000" be accepted as a goal for all sectors concerned with socioeconomic development.

2. In every community in every country in the world there are people who belong to social, political, or production-related organizations of one type or another. The involvement of the people in health care should build upon these existing organizations to facilitate the integration of primary health care into everyday social, economic and political life. Separate independent organizations concerned with health alone should *not* be developed.

3. For people to be involved in the planning, organization, operation, financing, and control of health care, they must have political and economic power. The process of decentralizing the health care system must accordingly be accompanied by a shift of power to the social periphery, leading to increased local control of resources.

4. Under the leadership and guidance of local, social, political, and production-related organizations following the delegation of effective political and economic power, the contribution of the people to health could take many forms, involving different members of the community in different situations, for example:

(*a*) taking part in development activities aimed at improving the quality and standard of life through more adequate food, better housing, cleaner water, improved sanitation, etc.;

(*b*) complementing the human resources of the health system by providing basic preventive and curative services;

(*c*) undertaking group action to mobilize the community for mass campaigns leading to better conditions, protection, and awareness.

5. People have shown that they are capable of managing health care when they are given sufficient supervisory and financial authority over the health care system, i.e., when they have an effective role in the decision-making process that guides the development of the system.

6. The involvement of the people in health care is an effective way of extending the care of individuals and families by encouraging voluntary responsibility for various aspects of hygiene and environmental health. This form of "self-care" can play a vital role in sensitizing individuals to the

importance of other health promotion activities, e.g., changes in life-style, more responsible use of the health services, less abuse of medicaments, etc.

7. To promote the types of involvement outlined above, governments need to develop long-term strategies incorporating certain essential features:

(*a*) a strong and unequivocal commitment to primary health care by political leaders at every level;

(*b*) as part of this commitment, full acceptance of the principle that health is an overriding social goal of *all* sectors and not simply the concern of the health sector;

(*c*) acceptance by governments of responsibility for supporting industrial, social, political, and production-related organizations in the pursuit of this goal;

(*d*) the development, where people's organizations are weak, of strategies that can be used by all sectors to strengthen existing organizations and facilitate the free self-development of new ones in association with the decentralization process.

8. The role of people's organizations is of particular importance, as they are to be found in all parts of the country and exist at many, if not all, levels. These organizations can:

(*a*) initiate large-scale promotional and preventive action locally, even *before* the system of intermediate and local health services is fully developed;

(*b*) promote the importance of health and develop more effective ways of informing the public on health matters;

(*c*) facilitate intersectoral coordination at all levels;

(*d*) invest time and effort in strengthening the local capacity to manage organizations for socioeconomic development, thereby promoting a sense of social discipline based on the understanding and acceptance of national goals;

(*e*) monitor the health care system to ensure that it does not divorce itself from its commitment to the implementation of the primary health care approach.

9. The task of strengthening people's organizations and facilitating their activities is fundamental to the implementation of the primary health care approach. It poses a major challenge to governments and political leaders and their willingness to undertake it is perhaps the best measure of their political commitment to achieving "health for all by the year 2000" through primary health care.

Health Manpower Development

1. Health manpower has to be developed in accordance with the present and future needs of an ever-evolving health care system. This process should be part of the national policies and strategies for achieving "health for all by the year 2000" through the primary health care approach.

2. Health manpower development must follow the same decentralization

process as the health care system. This may require the sacrifice of national uniformity and rigid technical standards in the interests of improved coverage and local control. Technical standards can be progressively improved with time.

3. Priority should be given to developing the health manpower required to provide health care to all people at all levels, with particular attention to the social periphery. The categories and levels of health manpower to be developed should be sufficient to ensure the proper functioning and mutual support of every level of the health care system.

4. Health manpower development is much more than the training of the conventional workers inside the health services system. It should consider the people as part of this development since they are the most important resource of any country. Community health workers, neighbourhood and occupational health workers, and others engaged in health-related work in a community should be from that community, chosen by its people, and accountable to them.

5. Community health workers (barefoot doctors and health aides in the case of China) who have full-time responsibilities in health and are trained to take on these responsibilities should be remunerated for the health work. At the same time, however, they should be integrated into the social and economic life of the community, participating in socioeconomic activities so that they do not dissociate themselves from the people they are meant to serve.

6. The health team within each community should be administered by the local organization responsible for the management of the socioeconomic development of that community. In this way, health work becomes part of development, contributing to it, as well as benefiting from other developmental activities, particularly in the fields of housing, provision of safe water, food production and supply, and education.

7. The training given to all health workers should be conditioned by local problems, the social and technical possibilities for action, and the resources available. It should take place as close as possible to the working environment and should be socially oriented so that all health workers truly serve the people and are capable of mobilizing others to support and share in the tasks to be performed. Further, it should be shaped by appropriate technologies that are relevant to the problems to be dealt with.

8. The managerial aspects of health care should be emphasized from the outset of training and further developed throughout the whole process of continuing education.

9. The training of community health workers should be initiated by short simple instruction in the kinds of activity that will meet the expressed needs of the community. When they have proved their value to the people, their training should gradually be extended to cover additional tasks as required. This calls for the organization of continuing training programmes.

10. Continuing training programmes should at least:

(*a*) systematically provide health workers with the possibility of upgrading their knowledge and skills;

(*b*) make the maximum use of existing health facilities and higher-level personnel for in-service training;
(*c*) be continuously revised and upgraded in response to new problems and new possibilities for action.

11. For training programmes to be in tune with the requirements of the primary health care approach, the trainers must themselves receive proper training. They should learn how to use modern teaching/learning methods, but above all they should receive social orientation to become living examples of commitment to the people.

12. The high drop-out rate among community health workers in many countries is recognized to be an outstanding problem in the implementation of primary health care. There is no simple solution to this problem. However, the more health workers interact with others in their community, are remunerated by that community, are upgraded as local development requires, are professionally supported by higher levels, and have "job satisfaction", the less pressure there will be on them to seek better conditions elsewhere.

Financing Health Care

1. The method used to finance health care can be an important instrument of policy by facilitating the objectives of decentralization, involvement of the people, and self-reliance within a health care system. It affects:
(*a*) the distribution of resources;
(*b*) the social acceptability and economic efficiency of the services offered;
(*c*) the ease of administering services;
(*d*) the capacity of the health care system to finance its growth.

2. An understanding of the financing of the health care system as a whole is essential to the formulation of any "health for all" strategy. Without it, governments cannot answer the question "Who is paying and who benefits?", and "How much is paid out by whom for what?".

3. In many countries, an analysis of the health care system from the financial standpoint will uncover some disturbing facts:
(*a*) unreliability of funding;
(*b*) misallocation of resources;
(*c*) heavy capital investments followed by inability to meet operating and staffing requirements;
(*d*) social unacceptability of the services available;
(*e*) inequitable sharing of costs.

More often than not these weaknesses are associated with a government administration that is highly centralized.

4. The same analysis may also uncover the fact that people in low-income groups are inclined to spend a lot on health services and that their expenditure in this respect is too high, quite unnecessary, and even self-endangering. There would seem to be a good case for encouraging them to use their money in more effective and less wasteful ways.

5. A further finding from a national analysis of health financing may be that individuals are only too ready to consume more of what they may not need, yet reluctant to consume and do more of what is in the best interest of the society as a whole.

6. These findings suggest that governments, as part of their strategies for implementing primary health care, should establish mechanisms to:

(*a*) increase awareness among individuals, families, and communities of the true cost of health care;

(*b*) encourage behaviour leading to a reduction in unnecessary expenditure; and

(*c*) reward communities that are able to achieve better health care at lower cost.

7. One such mechanism is the insurance scheme at brigade level in China, i.e., the Cooperative Medical Care Insurance Scheme (CMCIS). This scheme operates as part of the local management of health care and has the following advantages:

(*a*) it spreads the risk like all insurance schemes, but over a fairly small population, thereby discouraging individual abuses of the system;

(*b*) it only partially subsidizes the buying of drugs, thereby further discouraging abuse;

(*c*) it discourages the unnecessary use of services through the exercise of social control within the community;

(*d*) it promotes stronger links between health care and other community development activities through the pooling of development funds and the sharing of accounting responsibilities;

(*e*) it increases the acceptability of the health care system to its beneficiaries;

(*f*) it reduces dependence on central government;

(*g*) it facilitates the administration of health care financing.

8. The benefits of local insurance schemes are not confined to the people they cover. The nationwide implementation of such schemes helps to clarify the role of government in financing the development of the health care system. The government can focus its attention on building up the intermediate services necessary to support the peripheral services in the way outlined earlier. Capital investments are placed on a firm footing, as much of the operating costs will be paid for by the funds collected locally. In addition, the government can promote a wider acceptance of what it considers to be in the best interests of the nation by subsidizing services that otherwise might not be demanded (e.g., immunization and family planning). Most importantly, the role of the government in reallocating resources to overcome local and regional imbalances is strengthened.

* * *

It is now six years since the target of "health for all by the year 2000" was unanimously adopted by the vast majority of countries and four years since the reaffirmation at Alma-Ata that primary health care is the key to the

achievement of this objective. While some progress has been made in a number of countries, time is running out. Perhaps there has been too much talk about primary health care, too many papers, seminars, conferences, and workshops trying to perfect and explain the concept and principles of such care. There is no doubt that the saturation point is being reached as regards the theoretical and intellectual aspects of the subject. Now the time has come for action. It is imperative to move ahead from theory to practice, from concepts and principles to deeds, from paper to people. It must be demonstrated repeatedly in actual country situations that primary health care *is* feasible and *can* be successfully implemented. This is going to be a difficult and challenging process, and many political, social, and economic obstacles will have to be overcome. Every experience in this area should be used for the benefit of all countries. Thus a country's success in some aspects of primary health care can stimulate and encourage others. Failures can also be used by other countries in order to avoid repeating mistakes. Countries should have more opportunities for sharing their experience of primary health care. Their cooperation is needed in this respect, together with more interchanges of skills—not just in the technical, managerial, and communication fields, but also in those of politics and advocacy. It was as a contribution to such experience-sharing that the Inter-regional Seminar on Primary Health Care in Yexian County was held. It is hoped that the findings and the conclusions presented above, as well as the material prepared during the exploration phase of the seminar will be of use in other parts of the world.

It was clear to the participants in the seminar that a variety of approaches to primary health care—other than those being implemented in China—were being used in many countries, and that these also should be meticulously analysed for the benefit of all.

While historical, cultural, social, economic, and political backgrounds and circumstances make each country different from others, the practice of primary health care in China offers some important lessons that can be applied elsewhere as well as presenting many useful points of reference for those seeking to implement primary health care in other settings. Perhaps the most important lesson learnt in China through this inter-regional seminar is that "health for all by the year 2000" is a target that *can* be achieved and that primary health care *can* be successfully implemented in spite of limited resources, the many obstacles normally present in any process of social change, and a low *per capita* income.

Finally, the Inter-regional Seminar on Primary Health Care in Yexian County has proved a practical means of promoting and practising technical cooperation among countries. The participants were deeply conscious that they had had a unique opportunity to study a primary health care system at work not only to the benefit of all the people of one particular country, but also to the potential benefit of millions of human beings far beyond its frontiers.

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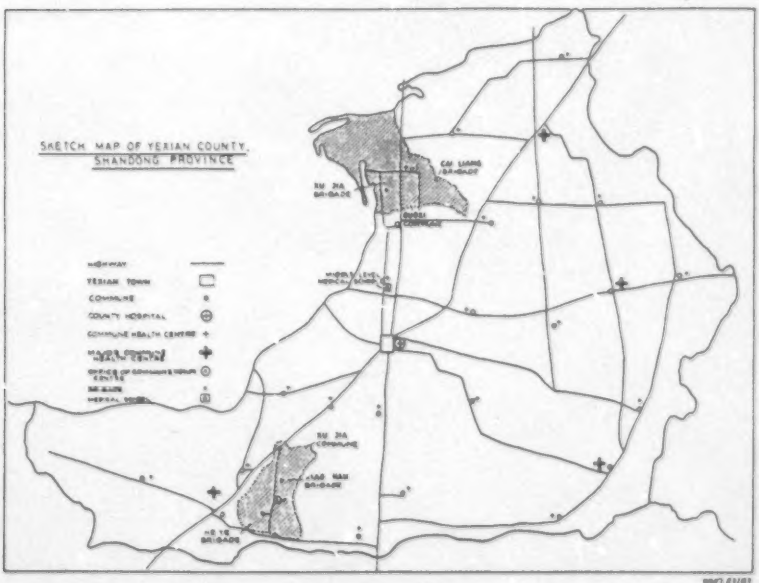
Annex

Information Sheets Distributed at the Seminar

IRS/PHC/WD/82.01

INTERREGIONAL SEMINAR ON PRIMARY HEALTH CARE
YEXIAN COUNTY, 13-26 JUNE 1982

LOCATION OF SHANDONG PROVINCE



SKETCH MAP OF XU JIA PEOPLE'S COMMUNE

SKETCH MAP OF GUOXI PEOPLE'S COMMUNE

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IRS/PHC/WD/82.02

INTERREGIONAL SEMINAR ON PRIMARY HEALTH CARE
YEXIAN COUNTY, 13-26 JUNE 1982

GUOXI PEOPLE'S COMMUNE
(information as of 1981)

AREA: 72.6 km² (7260 ha or 108 900 Mu)
cultivated 28.23 km² (38.9%)

POPULATION: 28 062

Age Group	Total	Male	Female
0-4	2 175	1 061	1 114
5-14	5 279	2 560	2 719
15-44	13 330	6 532	6 798
45-59	3 356	1 715	1 641
60 & over	3 922	1 845	2 077
Total	28 062	13 713	14 349

FULL-TIME LABOUR FORCE

TOTAL	MALE	FEMALE
13 267	7 129	6 138

PRODUCTION BRIGADES

Total	26
mainly agriculture	23
mainly fishing	3

COMMUNE FACTORIES/ENTERPRISES

Total	35

Distance from remotest brigade to commune health centre	10 km
time by bicycle	40 minutes
by truck	15 minutes

PRODUCTION

Main products in order of economic importance

	Market Value	% Total Production
Wheat	¥ 4 058 700	20.0
Fishing	¥ 2 055 000	10.1
Maize	¥ 1 680 000	8.3
Peanuts	¥ 1 510 000	.4
Tailoring	¥ 489 000	2.4
Vegetables	¥ 478 000	2.4
Fruit	¥ 177 740	.9
Soy beans	¥ 67 000	.3

BASIC ECONOMIC INFORMATION

INCOME

TOTAL	¥ 21 881 000
From brigade and team agriculture	¥ 8 576 000
From other brigade and team activities	¥ 8 598 000
From commune enterprise and sideline	¥ 3 107 000
From family sideline	¥ 1 600 000

EXPENDITURES

TOTAL	¥ 20 281 000
Production and management costs of brigades and teams	¥ 8 107 000
of commune enterprise and sideline	¥ 2 584 000
Cash distributed to commune members	¥ 4 477 000
Value of kind distributed to members	¥ 2 097 000
Income retained for reserve funds of brigades and teams	¥ 1 886 000
reserve funds of commune enterprises	¥ 340 000
welfare funds of brigades and teams	¥ 283 000
welfare funds of commune enterprises	¥ 146 000
other funds	¥ 44 000
Government tax of brigades and teams	¥ 280 000
of commune enterprises	¥ 37 000

ESTIMATED NET PER CAPITA INCOME
(in cash and in kind)
¥ 291.28 ($ 175)

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page 2

HEALTH SITUATION

Number of births - 442 (15.75‰)
Number of deaths - 247 (8.80‰)
Deaths under
1 year - 3
Deaths 1-4 years - none

Reported communicable diseases

	TOTAL 332
Virus hepatitis	323
Epidemic cerebrospinal meningitis	3
Measles	2
Dysentery	2
Typhoid	2

COMMUNE HEALTH CENTRE

NUMBER OF BEDS

Total 17

STAFF

Total 40

Physicians (western trained)	- 5	Assistant dentists	- 1
Middle grade physicians western trained	- 7	Assistant pharmacists	- 4
traditional Chinese	- 1	Laboratory technicians	- 1
Nurses	- 2	X-ray technicians	- 1
Assistant nurses	- 3	Other technicians	- 6
Midwives	- 3	General service	- 6

SERVICES PERFORMED

OUTPATIENT consultations	87 163
INPATIENTS	588
Average length of stay	8.85 days

Referrals

inpatients referred from brigades	532
inpatients referred from other levels	56
inpatients referred to county level	17
outpatients referred to county level	29

Most sophisticated surgery - subtotal gastrectomy

MOST IMPORTANT CAUSES OF CONSULTATIONS

(1) all other diseases of the respiratory system
(2) diseases of the digestive system
(3) diseases of the circulatory system
(4) unknown and all others not listed
(5) injuries, burns, etc.
(6) diseases of the genitourinary system

MOST IMPORTANT CAUSES OF HOSPITALIZATION

(1) diseases of the digestive system
(2) all other diseases of the respiratory system
(3) unknown and all others not listed
(4) diseases of the circulatory system
(5) injuries, burns, etc.
(6) diseases of the genitourinary system

DRUGS

Centre has no garden for medicinal herbs
Centre prepares 16 traditional and 3 western drugs

FINANCIAL INFORMATION

INCOME

Total	¥ 305 300
Allocation from higher levels	¥ 112 000
Payment from brigades	¥ 16 804
Direct payment from individuals	¥ 128 996
Sale of drugs	¥ 15 100
Sale of refuse	¥ 900
Balance (from 1980)	¥ 31 500

EXPENDITURES

Total	¥ 305 300
Salaries and bonuses	¥ 30 500
Drugs	
western	¥ 98 100
traditional	¥ 7 800
Maintenance	¥ 24 000
Equipment	¥ 6 900
Training	¥ 700
Other	¥ 25 200
Balance (for 1982)	¥ 112 100

MATERIAL RECEIVED FROM HIGHER LEVEL
(not accounted as income)

Portable autoclave	1
Microscope	1
Electric suction apparatus	1
Sphygmomanometer	1
Electric dental drill	1
Photoelectric colorimeter	1
Delivery table	1
ECG machine	1
Gatch beds	4
1/10 000 (precision) balance	1
Incubator	1
Dental unit	1
X-ray projection chair	1
Contraceptives - condoms	30 000
- pills	80 000
- IUDs	800
D.P.T.	1 000 ml
Measles vaccine	630 ml
Poliomyelitis pills	3 500
Purified diphtheria vaccine	600 ml
Encephalitis B vaccine	410 ml
Epidemic meningitis vaccine	2 000 ml

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INTERREGIONAL SEMINAR ON PRIMARY HEALTH CARE
YEXIAN COUNTY, 13-26 JUNE 1982

XU JIA BRIGADE
GUOXI PEOPLE'S COMMUNE
(information as of 1981)

AREA: 2.93 km^2 (4400 Mu)
cultivated 2.71 km^2 (92.5%)

POPULATION: 2189

Age Group	Total	Male	Female
0-4	128	70	58
5-14	393	182	211
15-44	1 088	492	596
45-59	213	94	119
60 & over	367	136	231
Total	2 189	974	1 215

FULL-TIME LABOUR FORCE

TOTAL	MALE	FEMALE
931	426	505

9 agricultural production teams
2 groups (1 mainly fishing; 1 sideline)

HOUSEHOLDS: 608

with electricity	-	608
with piped water	-	none
with shared piped water	-	none
with individual pumps	-	608
with latrines	-	608
with biogas	-	

SOCIAL INFORMATION

Institutions	Number	Number Children Attending
Nurseries	1	33
Kindergartens	1	92
Schools		
primary	1	267
secondary	none	

Distance of remotest team to health station 0.5 km

PRODUCTION

Main products in order of economic importance

	Market Value	% Total Production
Wheat	¥ 370 000	21.2
Forestry, fishing, milling, weaving	¥ 345 471	19.8
Tailoring	¥ 297 000	17.0
Stock r ising	¥ 271 529	15.5
Peanuts	¥ 200 000	11.5
Maize	¥ 150 000	8.6
Firewood	¥ 60 000	3.4
Vegetables	¥ 45 600	2.6

BASIC ECONOMIC INFORMATION

INCOME

TOTAL	¥ 1 832 200
From brigade and team agriculture	¥ 830 200
From other brigade and team activities	¥ 914 000
From family sideline	¥ 88 000

EXPENDITURES

TOTAL	¥ 1 744 000
Production and management costs	¥ 756 300
Cash distributed to commune members	¥ 488 118
Value of kind distributed to members	¥ 169 757
Income retained for reserve funds	¥ 281 982
welfare funds	¥ 24 000
other funds	¥ none
Government tax	¥ 24 043

ESTIMATED NET PER CAPITA INCOME
(in cash and in kind)
¥ 340.74 ($ 204)

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HEALTH SITUATION

Number of births: 34 (15.5‰)
Number of deaths: 22 (10.0‰)
from diseases of the circulatory system 18
from neoplasms 3
from injuries, burns, etc. 1
No deaths under five years of age

Reported communicable diseases

Viral hepatitis - 27

COOPERATIVE MEDICAL HEALTH STATION

STAFF: 5 barefoot doctors (3 male, 2 female)
3 with initial training only; 2 with retraining

SERVICES PERFORMED

CLINICAL CONSULTATIONS	
TOTAL	24 240
at station	18 480
at home	5 400
in the field	360
DELIVERIES	
TOTAL	34
at station	none
at home	31
referred to commune	3
VACCINATIONS	
TOTAL	1 380
at station	980
at home	400
GYN. SURVEY/PERINATAL CHECK-UP	
TOTAL (all at station)	535
CHILDREN'S CHECK-UP	
TOTAL (all in the field)	115
CHILDREN'S HEALTH EDUCATION	
TOTAL (all in the field)	48
TRAINING OF HEALTH AIDES, HYGIENISTS	
TOTAL (all in the station)	7
HEALTH EDUCATION/ELIM. OF 4 PESTS	
TOTAL	535
at station	none
at home	425
in the field	110
FAMILY PLANNING/CONTRACEPTION CONTROL	
TOTAL	287
male	
sterilization	18
condoms	34
female	
I.U.D.	164
sterilization	40
pills	22
others	9

MOST IMPORTANT CAUSES FOR CONSULTATION

(1) Common cold
(2) Upper respiratory infection
(3) Gastritis
(4) Dyspepsia

FINANCIAL INFORMATION

INCOME	
TOTAL	₩ 12 981
Allocation from higher levels	none
Contribution from cooperative medical care system	₩ 3 102
Contribution from brigade welfare fund	₩ 5 547
Direct payments from individuals	₩ 2 732
Sale of drugs and service fees from other brigades	₩ 1 600

EXPENDITURES	
TOTAL	₩ 12 981
Salaries and bonuses	₩ 3 045
Drugs	₩ 6 400
Maintenance	₩ 1 025
Equipment	₩ 286
Training	₩ 72
Payment to commune health centre	₩ 1 050
Other	₩ 69
Savings	₩ 1 034

MATERIAL RECEIVED FROM HIGHER LEVEL (not accounted as income)	
Poliomyelitis pills	120
Measles vaccine	52 ml
Purified diphtheria vaccine	45 ml
D.P.T. vaccine	65 ml
Encephalitis B vaccine	30 ml
Epidemic meningitis vaccine	156 ml
Condoms	2 350
Contraceptive pills	2 400

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IRS/PHC/WL/82.04

INTERREGIONAL SEMINAR ON PRIMARY HEALTH CARE
YEXIAN COUNTY, 13-26 JUNE 1982

CAI LIANG BRIGADE
GUOXI PEOPLE'S COMMUNE
(information as of 1981)

AREA: .775 km^2 (1163 Mu)
cultivated .655 km^2 (84.5%)

POPULATION: 529

Age Group	Total	Male	Female
0-4	32	14	18
5-14	112	62	50
15-44	258	122	136
45-59	56	21	35
60 & over	71	35	36
Total	529	254	275

FULL-TIME LABOUR FORCE

TOTAL	MALE	FEMALE
261	127	134

3 agricultural production teams
4 groups (3 mainly for sideline activities; 1 for industry)

HOUSEHOLDS: 135

with electricity	-	135
with piped water	-	none
with shared piped water	-	none
with individual pumps	-	135
with latrines	-	135
with biogas	-	

SOCIAL INFORMATION

Institutions	Number	Number Children Attending
Nurseries	1	8
Kindergartens	1	18
Schools		
primary	1	67
secondary	none	-

Distance of remotest team to health station 300 m

PRODUCTION

Main products in order of economic importance

	Market Value	% Total Production
Wheat	¥ 100 700	26.6
Maize	¥ 69 200	18.3
Peanuts	¥ 61 587	16.3
Pig raising	¥ 25 181	6.7
Repairing and maintenance	¥ 24 808	6.6
Fruits	¥ 21 762	5.8
Firewood	¥ 14 000	3.7
Vegetables	¥ 8 500	2.2

BASIC ECONOMIC INFORMATION

INCOME

TOTAL	¥ 399 614
From brigade and team agriculture	¥ 279 086
From other brigade and team activities	¥ 98 528
From family sideline	¥ 22 000

EXPENDITURES

TOTAL	¥ 377 614
Production and management costs	¥ 140 549
Cash distributed to commune members	¥ 138 929
Value of kind distributed to members	¥ 42 871
Income retained for reserve funds	¥ 20 204
welfare funds	¥ 20 000
other funds	¥ 10 000
Government tax	¥ 5 061

ESTIMATED NET PER CAPITA INCOME
(in cash and in hand)
¥ 385.26 ($ 231)

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page 2

HEALTH SITUATION

Number of births: 10 (18.9‰)
Number of deaths: 7 (13.2‰)
from diseases of the circulatory system 4
from neoplasms 3
No deaths under five years of age

Reported communicable diseases

Viral hepatitis - 1

COOPERATIVE MEDICAL HEALTH STATION

STAFF: 3 barefoot doctors (1 male, 2 female) all with initial plus refresher training

SERVICES PERFORMED

CLINICAL CONSULTATIONS	
TOTAL	3 183
at station	2 223
at home	730
in the field	230

DELIVERIES	
TOTAL	10
at station	1
at home	8
referred to commune	1

VACCINATIONS	
TOTAL	140
at station	80
at home	60

GYN. SURVEY/PERINATAL CHECK-UP	
TOTAL	179
at station	131
at home	48

HEALTH EDUCATION/ELIM. OF 4 PESTS	
TOTAL	570
at station	100
at home	250
in the field	220

FAMILY PLANNING/CONTRACEPTION CONTROL	
TOTAL	73
male (sterilization)	7
female	
I.U.D.	36
sterilization	26
pills	4

MOST IMPORTANT CAUSES FOR CONSULTATION

(1) Common cold
(2) Dyspepsia
(3) Gastritis
(4) Bronchitis

FINANCIAL INFORMATION

INCOME	
TOTAL	¥ 4 632
Allocation from higher levels	none
Contribution from cooperative medical care system	¥ 1 760
Contribution from brigade welfare fund	¥ 1 850
Direct payments from individuals	¥ 205
Sale of drugs and service fees from other brigades	¥ 817

EXPENDITURES	
TOTAL	¥ 4 632
Salaries and bonuses	¥ 1 680
Drugs	
Western	¥ 2 302
Traditional	¥ 165
Maintenance	¥ 110
Equipment	¥ 30
Training	¥ none
Payment to commune health centre	¥ 252
Other	¥ 30
Savings	¥ 63

MATERIAL RECEIVED FROM HIGHER LEVEL (not accounted as income)	
Poliomyelitis pills	30
Purified diphtheria vaccine	15 ml
Encephalitis B vaccine	8 ml
D.P.T. vaccine	20 ml
Measles vaccine	8 ml
Epidemic meningitis vaccine	37 ml
Oral contraceptive pills	1 000
Condoms	500
Microscope	1
Baby scale	1
Body length measuring box	1
Stethescope (fetal)	1

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IRS/PHC/WD/82.05

INTERREGIONAL SEMINAR ON PRIMARY HEALTH CARE
YEXIAN COUNTY, 13-26 JUNE, 1982

XUJIA PEOPLE'S COMMUNE
(information as of 1981)

AREA: 47.70 km² (4770 ha or 71 550 Mu)
cultivated 34.93 km² (73.2%)

POPULATION: 35 864

Age Group	Total	Male	Female
0-4	2 232	1 151	1 081
5-14	7 283	3 732	3 551
15-44	16 553	8 537	8 016
45-59	5 198	2 656	2 542
60 & over	4 598	2 246	2 352
Total	35 864	18 322	17 542

FULL-TIME LABOUR FORCE

TOTAL	MALE	FEMALE
17 392	9 804	7 588

PRODUCTION BRIGADES

Total (all mainly agriculture) 45

COMMUNE FACTORIES/ENTERPRISES

Total 6

Distance from remotest brigade to commune health centre 9 km

trip by bicycle 35 minutes
by truck 12 minutes

PRODUCTION

Main products in order of economic importance

	Market Value	% Total Production
Wheat	¥ 3 286 000	16.2
Plastic products	¥ 3 000 000	14.8
Lime	¥ 1 400 000	6.9
Maize	¥ 1 240 000	6.1
Vegetables	¥ 690 000	3.4
Peanuts	¥ 678 000	3.3
Fruit	¥ 143 000	.7
Soy beans	¥ 129 000	.6

BASIC ECONOMIC INFORMATION

INCOME

TOTAL	¥ 23 780 000
From brigade and team agriculture	¥ 6 880 000
From other brigade and team activities	¥ 8 420 000
From commune enterprise and sideline	¥ 6 080 000
From family sideline	¥ 2 400 000

EXPENDITURES

TOTAL	¥ 21 380 000
Production and management costs of brigades and teams	¥ 6 520 000
of commune enterprise and sideline	¥ 5 109 000
Cash distributed to commune members	¥ 3 590 000
Value of kind distributed to members	¥ 2 860 000
Income retained for reserve funds of brigades and teams	¥ 1 765 000
reserve funds of commune enterprises	¥ 586 000
welfare funds of brigades and teams	¥ 244 000
welfare funds of commune enterprises	¥ 251 000
other funds	¥ 11 000
Government tax of brigades and teams	¥ 310 000
of commune enterprises	¥ 134 000

ESTIMATED NET PER CAPITA INCOME
(in cash and in kind)
¥ 246.77 ($ 148)

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HEALTH SITUATION

Number of births - 541 (15.08‰)
Number of deaths - 309 (8.62‰)
Deaths under 1 year - 7
Deaths 1-4 years - 1

Reported communicable diseases

	TOTAL
	71
Virus hepatitis	58
Dysentery	9
Epidemic cerebrospinal meningitis	1
Measles	1
Typhoid	1
Malaria	1

COMMUNE HEALTH CENTRE

NUMBER OF BEDS
Total 15

STAFF
Total 26

Physicians (western trained)	- 3	Assistant dentists	- 1
Traditional Chinese doctor	- 1	Laboratory technicians	- 1
Middle grade physicians western trained	- 5	Other technicians	- 6
traditional Chinese	- none	Administrative staff	- 1
Nurses	- none	Health aides	- 1
Assistant nurses	- 3	General service	- 3
Midwives	- 1		

SERVICES PERFORMED

OUTPATIENT consultations	43 895
INPATIENTS	328
Average length of stay	6.4 days

Referrals

inpatients referred from brigades	328
inpatients referred to county level	7
inpatients referred to other levels	17
outpatients referred to county level	53

Most sophisticated surgery - tubosterilization; IUD insertion

MOST IMPORTANT CAUSES OF CONSULTATIONS

(1) Diseases of the digestive system
(2) All other diseases of the respiratory system
(3) Unknown and all others not listed
(4) Diseases of the circulatory system
(5) Diseases of the genitourinary system
(6) Injuries, burns, etc.

MOST IMPORTANT CAUSES OF HOSPITALIZATION

(1) Diseases of the digestive system
(2) All other diseases of the respiratory system
(3) Diseases of the circulatory system
(4) Injuries, burns, etc.
(5) Unknown and all others not listed
(6) Diseases of the genitourinary system

DRUGS

Centre has no garden for traditional herbs
Centre prepares 2 traditional and 4 western drugs

FINANCIAL INFORMATION

INCOME

Total	¥ 128 000
Allocation from higher levels	¥ 20 000
Direct payment from individuals	¥ 72 500
Sale of drugs	¥ 2 600
Sale of waste material	¥ 200
Balance (from 1980)	¥ 32 900

EXPENDITURES

Total	¥ 128 000
Salaries and bonuses	¥ 22 500
Drugs	
western	¥ 41 800
traditional	¥ 7 700
Maintenance	¥ 7 700
Equipment	¥ 2 700
Training	¥ 500
Other	¥ 15 400
Balance (for 1982)	¥ 29 700

MATERIAL RECEIVED FROM HIGHER LEVEL
(not accounted as income)

Photoelectrocolorimeter	1 set
Spectrophotometer	1 set
Oxygen tank	1
E.C.G	1
Microscope	1
Oxygen tank carrier	1
Oxygen mask	1
Examination bed	5
Electric suction apparatus	1
Ward beds	10
Bed mattresses	20
Centrifuge (small)	1
Dressing trolley	1
Wheeled stretcher	1
Incubator	1
Universal operating table	1
Refrigerator	1
Dessicator	1
Ultrasonic diagnosis apparatus	1
Oral contraceptive pills	11 000
Poliomyelitis pills	5 600
Purified diphtheria vaccine	900 ml
Encephalitis B vaccine	600 ml
D.P.T. vaccine	1 300 ml
Measles vaccine	880 ml
Epidemic meningitis vaccine	3 000 ml

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INTERREGIONAL SEMINAR ON PRIMARY HEALTH CARE
YEXIAN COUNTY, 13-26 JUNE 1982

XIAO HAN BRIGAD.
XU JIA PEOPLE'S COMMUNE
(information as of 1981)

AREA: 1.69 km^2 (2530 Mu)
cultivated 1.35 km^2 (80.2%)

POPULATION: 1641

Age Group	Total	Male	Female
0-4	81	49	32
5-14	332	184	148
15-44	794	408	386
45-59	209	110	99
60 & over	225	113	112
Total	1 641	864	777

FULL-TIME LABOUR FORCE

TOTAL	MALE	FEMALE
845	459	386

7 agricultural production teams

HOUSEHOLDS: 422

with electricity	-	420
with piped water	-	422
with shared piped water	-	none
with individual pumps	-	none
with latrines	-	422
with biogas	-	

SOCIAL INFORMATION

Institutions	Number	Number Children Attending
Nurseries	1	30
Kindergartens	1	75
Schools		
primary	1	252
secondary	none	-

Distance of remotest team to health station 100 m

PRODUCTION

Main products in order of economic importance

	Market Value	% Total Production
Lime production	¥ 670 700	60.0
Wheat	¥ 113 000	10.1
Brush processing	¥ 70 000	6.3
Maize	¥ 43 000	3.8
Firewood	¥ 25 000	2.2
Vegetables	¥ 16 500	1.5
Peanuts	¥ 13 770	1.2
Sweet potatoes	¥ 12 000	1.0

BASIC ECONOMIC INFORMATION

INCOME

TOTAL	¥ 1 267 857
From brigade and team agriculture	¥ 225 714
From other brigade and team activities	¥ 892 143
From family sideline	¥ 150 000

EXPENDITURES

TOTAL	¥ 1 117 857
Production and management costs	¥ 638 498
Cash distributed to commune members	¥ 224 655
Value of kind distributed to members	¥ 136 000
Income retained for reserve funds	¥ 88 083
welfare funds	¥ 5 772
other funds	¥ none
Government tax	¥ 24 849

ESTIMATED NET PER CAPITA INCOME
(in cash and in kind)
¥ 311.19 ($ 187)

HEALTH SITUATION

Number of births:	20 (12.2‰)
Number of deaths:	13 (7.9‰)
Deaths under 1 year:	2
Deaths 1-4 year:	1

No communicable diseases reported

Deaths from diseases of the circulatory system	5
Deaths from diseases of the digestive system	4
Deaths from neoplasms	2
Deaths from tuberculosis	1
Deaths from injuries, burns, etc.	1

COOPERATIVE MEDICAL HEALTH STATION

STAFF: 3 barefoot doctors (1 male, 2 female) 1 with initial training only; 2 with retraining

SERVICES PERFORMED

CLINICAL CONSULTATIONS	
TOTAL	11 094
at station	10 860
at home	234
in the field	none

DELIVERIES	
TOTAL	20
at station	none
at home	17
referred to commune	3

VACCINATIONS	
TOTAL	911
at station	911
at home	none

GYN. SURVEY/PERINATAL CHECK-UP	
TOTAL (all at station)	248

CHILDREN PHYSICAL CHECK-UP	
TOTAL (all in the field)	302

HEALTH EDUCATION/ELIM. OF 4 PESTS	
TOTAL	364
at station	none
at home	312
in the field	52

FAMILY PLANNING/CONTRACEPTION CONTROL	
TOTAL	249
male	
sterilization	3
condom	11
female	
I.U.D.	163
sterilization	58
pills	14

MOST IMPORTANT CAUSES FOR CONSULTATION

(1) Common cold
(2) Gastroenteritis
(3) Lumbago

FINANCIAL INFORMATION

INCOME	
TOTAL	¥ 10 849
Allocation from higher levels	none
Contribution from cooperative medical care system	¥ 3 358
Contribution from brigade welfare fund	¥ 2 610
Direct payments from individuals	¥ 1 713
Sale of drugs and service fees from other brigades	¥ 3 168

EXPENDITURES	
TOTAL	¥ 10 849
Salaries and bonuses	¥ 1 260
Drugs	¥ 5 426
Maintenance	¥ 300
Equipment	¥ 1 000
Training	none
Payment to commune health centre	none
Other	¥ 50
Savings	¥ 2 813

MATERIAL RECEIVED FROM HIGHER LEVEL (not accounted as income)	
Poliomyelitis pills	170
Purified diphtheria vaccine	40 ml
Encephalitis B vaccine	24 ml
D.P.T. vaccine	65 ml
Measles vaccine	40 ml
Epidemic meningitis vaccine	120 ml
Sterilizer	1
Delivery bed	1
Surgery kit	1
Operating table	1
Sphygmomanometer	1
Balance	1
Baby scale	1
Condoms	800
Contraceptive pills	3 000
Trash basket	1

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INTERREGIONAL SEMINAR ON PRIMARY HEALTH CARE
YEXIAN COUNTY, 13-26 JUNE 1982

HE YE BRIGADE
XU JIA PEOPLE'S COMMUNE
(information as of 1981)

AREA: .381 km^2 (571 Mu)
cultivated .277 km^2 (72.9%)

POPULATION: 339

Age Group	Total	Male	Female
0-4	21	11	10
5-14	74	36	38
15-44	157	83	74
45-59	61	28	33
60 & over	26	11	15
Total	339	169	170

FULL-TIME LABOUR FORCE

TOTAL	MALE	FEMALE
244	122	122

1 agricultural production team

HOUSEHOLDS: 78

with electricity	-	78
with piped water	-	none
with shared piped water	-	none
with individual pumps	-	78
with latrines	-	78
with biogas	-	

SOCIAL INFORMATION

Institutions	Number	Number Children Attending
Nurseries	none	
Kindergartens	none	
Schools		
primary	1	25
secondary	none	

Distance of remotest team to health station 50 m

PRODUCTION

Main products in order of economic importance

	Market Value	% Total Production
Rope manufacture	¥ 50 000	28.0
Wheat	¥ 39 500	22.1
Maize	¥ 28 500	16.0
Textile knitting	¥ 15 000	8.4
Vegetables	¥ 5 600	3.1
Peanuts	¥ 5 000	2.8

BASIC ECONOMIC INFORMATION

INCOME

TOTAL	¥ 214 429
From brigade and team agriculture	¥ 90 538
From other brigade and team activities	¥ 87 891
From family sideline	¥ 36 000

EXPENDITURES

TOTAL	¥ 178 429
Production and management costs	¥ 61 497
Cash distributed to commune members	¥ 54 150
Value of kind distributed to members	¥ 35 026
Income retained for reserve funds	¥ 24 656
welfare funds	¥ 1 000
other funds	none
Government tax	¥ 2 100

ESTIMATED NET PER CAPITA INCOME
(in cash and in kind)
¥ 369.25 ($ 222)

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HEALTH SITUATION (1981)

Number of births: 4 (11.8‰)
Number of deaths: 3 (8.8‰)
from diseases of the circulatory system 2
from diseases of the genito-urinary system 1
No deaths under five years of age

No communicable diseases reported

COOPERATIVE MEDICAL HEALTH STATION

STAFF: 2 barefoot doctors (1 male, 1 female) both with initial and refresher training

SERVICES PERFORMED

CLINICAL CONSULTATIONS	
TOTAL	3 335
at station	3 212
at home	123
in the field	none

DELIVERIES	
TOTAL	4
at station	none
at home	4
referred to commune	none

VACCINATIONS	
TOTAL	205
at station	205
at home	none

GYN. SURVEY/PERINATAL CHECK-UP	
TOTAL	224
at station	220
at home	4

HEALTH EDUCATION/ELIM. OF 4 PESTS	
TOTAL	234
at station	none
at home	195
in the field	39

FAMILY PLANNING/CONTRACEPTION CONTROL	
TOTAL	54
male (sterilization)	none
female	
I.U.D.	29
sterilization	19
pills	6

MOST IMPORTANT CAUSES FOR CONSULTATION

(1) Common cold
(2) Gastroenteritis
(3) Lumbago

FINANCIAL INFORMATION

INCOME	
TOTAL	¥ 2 190
Allocation from higher levels	none
Contribution from cooperative medical care system	¥ 678
Contribution from brigade welfare fund	¥ 1 289
Direct payments from individuals	¥ 100
Sale of drugs and service fees from other brigades	¥ 123

EXPENDITURES	
TOTAL	¥ 2 190
Salaries and bonuses	¥ 930
Drugs	¥ 690
Maintenance	none
Equipment	¥ 167
Training	¥ 120
Payment to commune health centre	none
Other	¥ 72
Savings	¥ 211

MATERIAL RECEIVED FROM HIGHER LEVEL (not accounted as income)	
Poliomyelitis pills	60
Purified diphtheria vaccine	10 ml
Encephalitis B vaccine	6 ml
D.P.T. vaccine	15 ml
Measles vaccine	12 ml
Epidemic meningitis vaccine	30 ml
Oral contraceptive pills	1 100
Condoms	200
Pressure sterilizer	1
Delivery bed	1
Surgery kit	1
Sphygmomanometer	1
Balance	1
Pelvis caliper	1
Trash basket	1

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IRS/PHC/WD/82.08

INTERREGIONAL SEMINAR ON PRIMARY HEALTH CARE
YEXIAN COUNTY, 13-26 JUNE 1982

YEXIAN PEOPLE'S COUNTY HOSPITAL
(information as of 1981)

NUMBER OF BEDS

TOTAL	186
Internal medicine	30
Surgery	40
Communicable diseases	39
Gynaecology & obstetrics	32
Paediatrics	11
ENT	8
Traditional medicine	6

STAFF

TOTAL - 229

Physicians (western trained)	- 44	Senior nurses	14
General practitioners	- 30	Nurses	38
Specialists	- 14	Asst nurses	27
Cardiologist (1)		Midwives	2
Haematologist (1)		Pharmacists	2
Stomatologist (1)		Asst pharmacists	10
Digestive system (2)		Lab. tech.	1
Common surgery (2)		Tech.	8
Gyn/obs. (2)		X-ray tech.	4
Paediatrician (2)		Paramedics	13
Ear, nose, throat (1)		Administration	28
Radiologist (1)		Other (health aides, cooks, etc.)	26
Communicable diseases (1)			
Traditional doctors*	- 1		
Middle-grade doctors			
western trained	- 10		
traditional	- 1		

SERVICES PERFORMED

OUTPATIENT CONSULTATIONS AND VISITS

Total	200 858	%
Internal medicine		23.03
Surgery		27.71
ENT (incl. dentistry)		20.99
Gyn/obs.		12.58
Paediatrics		7.57
Trad. Chinese medicine		7.00
Communicable diseases		6.12

MOST IMPORTANT CAUSES FOR CONSULTATIONS

(1) Upper respiratory diseases
(2) Circulatory system diseases
(3) Digestive system diseases
(4) Neoplasms
(5) Genitourinary system diseases
(6) Locomotor system diseases

* Out of the 44 western trained physicians, 10 also practise traditional Chinese medicine.

SERVICES PERFORMED (continued)

INPATIENTS

Total	4904	%
Internal medicine		35.54
Surgery		24.93
Communicable diseases		12.72
Gyn/obs.		11.50
Paediatrics		7.39
ENT & stomatology		6.24
Traditional Chinese medicine		1.68

MOST IMPORTANT CAUSES OF HOSPITALIZATION

(1) Diseases of the circulatory system	10.32%
(2) Injuries, burns, poisoning and accidents	9.44%
(3) Neoplasms	8.24%
(4) Complications of pregnancy during labour, delivery and of the puerperium	7.61%
(5) All other diseases of the respiratory system	6.55%
(6) Acute respiratory infectious pneumonia and influenza	4.91%

DELIVERIES ATTENDED AT HOSPITAL

TOTAL	669
Number referred from lower levels	390
Number referred to upper levels	None

Normal - 380 Dystocia - 289

SURGERY

Most common surgical operations performed

Appendicitis	114
Gastroectomy	96
Intestinal resections	78
Herniorrhaphy	69
Thyroid operation	50
Gallstonectomy	43

More sophisticated operations

Congenital patent ductus arteriosus ligation
Removal of benign mediastinal tumour
Lobectomy
Removal of dural haematoma due to cranial trauma
Resection of bladder tumour and reconstruction of ureter

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SERVICES PERFORMED (continued)

Complicated operations

Splenectomy and anastomosis of splenorenal veins
Middle and lower oesophagectomy and gastro-esophageal anastomosis at inferior and superior arches
Radical operation of cervical cancer
Radical mastectomy

LENGTH OF STAY

Average	10.8 days
Maternity	1.2 days

Occupancy rate of beds 80.90%

DISCHARGE STATUS

Total	4 904
Recovered	3 596
Improved	839
Referred to other hospitals	32
Not improved	267
Died	170

REFERRALS

	Total	Inpatient	Outpatient
from communes	52 245	1 045	51 200
from lower levels	none	none	none
to provincial level	56	32	24
to prefectural level	34	none	34

HOME VISITS BY HOSPITAL STAFF

TOTAL	227
(1) Complications of pregnancy during labour and delivery and of the puerperium	108
(2) Diseases of the circulatory system	62
(3) Injuries, burns, poisoning and accidents	45
(4) Diseases of the digestive system	12

VISITS TO COMMUNES

150 visits each on average lasting about 2 days and involving 1-3 medical doctors

TRAINING

	1981	1980	1979	1978	1977
No. received from lower levels	18	29	32	33	30
No. staff sent to higher levels	27	3	4	6	5
No. staff visiting health stations/ centres	26	28	24	19	16

MOST COMMON DRUGS MADE AT HOSPITAL

WESTERN	TRADITIONAL
(1) 10% Glucose solution	(1) hepatitis mixture No. 1
(2) 5% Glucose solution	(2) hepatitis mixture No. 2
(3) 4% Sodium bicarbonate	(3) xanthium mixture No. 1
(4) 0.9% NaCl solution	(4) xanthium mixture No. 2
(5) Ringer's solution	(5) pubescent angelica root decoction
(6) 20% mannitol solution	(6) subprostrate sophora root capsule
(7) 50% $MgSO_4$ solution	(7) pneumonia powder
(8) Tetracycline tab.	(8) glycyrrhiza composite mixture
(9) Terramycin tab.	(9) fructus crataegi pill
(10) Vit B_{12} inject.	(10) chuanxiong rhizome composite inject.
(11) Berberine inject.	
(12) 10% inject.	
(13) 1% dicaine inject.	
(14) placenta inject.	
(15) sodium iodide inject.	
(16) EDTA inject.	
(17) 1% Procaine inject sol.	
(18) 1% ephedrine and dicaine sol.	
(19) distilled water	
(20) chloramphenicol eyedrops	

The hospital does not have a garden for Chinese medicinal herbs

FINANCIAL INFORMATION

INCOME

Total	¥ 1 672 800
Allocation from higher levels	¥ 300 000
Allocation from county	¥ 476 000
Direct payment from individuals	¥ 586 800
Training fees from commune	¥ 864
Sale of drugs	¥ 30 300
Ambulance service fee and sale of refuse	¥ 9 736
Balance (from 1980)	¥ 269 100

EXPENDITURES

Total	¥ 1 672 800
Salaries and bonuses	¥ 175 600
Drugs:	
Western	¥ 299 300
Traditional	¥ 20 300
Construction/maintenance	¥ 570 000
Equipment	¥ 112 000
Training	¥ 2 900
Welfare funds and other	¥ 159 300
Balance (for 1982)	¥ 333 400

MATERIAL RECEIVED FROM HIGHER LEVEL
(not accounted as income)

Delivery bed	1
Refrigerator	2
Cabinet sterilizer	2
Measles vaccine	(for 50 persons)
BCG	30
Smallpox vaccine	10
Tetanus toxoid	15
Contraceptives:	
pills	6 000
condoms	1 600
IUD	400
diaphragms	8 900 pieces
jelly	100 tubes

IRS/PHC/WD/82.09

INTERREGIONAL SEMINAR ON PRIMARY HEALTH CARE
YEXIAN COUNTY, 13-26 JUNE 1982

MIDDLE-LEVEL MEDICAL SCHOOL YEXIAN COUNTY

(information as of 1981)

MAIN FUNCTIONS

(1) Training of barefoot doctors
(2) Training of public health workers and technicians
(3) Upgrading specialized knowledge of commune and county-level health workers

STAFF

Total	22
Director and Deputy Directors	3
Full-time teachers/instructors	17
Administration	1
General service	1
Number of physicians with post/graduate and/or special training	16
Number of part-time teachers/instructors	7

FINANCIAL INFORMATION

Income (from local government)	¥ 51 900
Expenditures	
Total	¥ 51 900
Salaries and bonuses	¥ 20 000
Barefoot doctor training (per diem, teaching materials, etc)	¥ 13 900
Administration (water, electricity, etc.)	¥ 14 800
Balance returned to local government	¥ 3 200

Material received from higher levels (not accounted as income)

Microscopes	10
Electric disector	1
Refrigerator	1
Incubator	2
ECG machine	1
Slide projector	1
Spring graphic recorder	3
Electric graphic recorder	2
Anatomy and acupuncture models	

TRAINING ACTIVITIES

Type of training	Categories of personnel trained	Duration in weeks and hours	Number trained (Year - 1981)
1. Initial and retraining	Barefoot doctor	52 weeks	2 022
2. Traditional medicine*	Barefoot doctor	26 weeks	187
3. MCH	Barefoot doctor	13 weeks	132
4. Acupuncture	Barefoot doctor	13 weeks	73
5. Epidemic and prevention	Barefoot doctor	26 weeks	45
6. Epidemic and prevention	Health technician and health worker	26 weeks	44
7. Pharmacy	Health technician and health worker	13 weeks**	21
8. Treatment	Health technician and health worker	52 weeks	60
9. Traditional medicine	Western trained medical doctor	26 weeks	35
10. Traditional medicine	Western trained medical doctor	13 weeks	75
11. Nursing	New health worker	52 weeks	73

* This course has been stopped now because they will organize at the Prefectual and Provincial levels.

** The duration of this course has been changed to 26 weeks.

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IRS/PHC/WD/82.11

INTERREGIONAL SEMINAR ON PRIMARY HEALTH CARE
YEXIAN COUNTY, 13-26 June 1982

MATERNAL AND CHILD HEALTH STATION
YEXIAN COUNTY

(information as of 1981)

MAIN FUNCTIONS

(1) Protection and improvement of health of women and children
(2) Coordination, guidance and monitoring of MCH work carried out at lower levels
(3) Antenatal, perinatal and post-partum health care, including prevention, diagnosis and treatment of diseases
(4) Professional guidance to family planning work
(5) Training of MCH workers for the lower levels
(6) Health education
(7) Survey and investigation of subjects related to MCH care, and undertaking of scientific research related to actual needs

STAFF

Total	10
Physicians	4
Assistant physicians	4
Nurses	1
Assistant nurses	1

SERVICES PERFORMED

Service activities

(1) Popularization of scientific method of delivery
(2) General check-up and treatment of gynaecological diseases
(3) Protection of working women during pregnancy, postnatal, perinatal, breastfeeding and menopause
(4) Professional guidance for family planning
(5) Prevention and treatment of childhood problems
(6) Health education

Training activities

(1) Workshop for commune MCH workers on "the application of delivery procedure charts"
(2) Workshop for commune MCH workers on "perinatal care and early education"
(3) Two workshops for nurses and kindergarten teachers on children's care, including infant and baby feeding"

Research activities

(1) Study on low birth-weight babies

SERVICES PERFORMED (continued)

Support activities

(1)	to commune health centres:	training course for commune MCH workers; consultation for MCH workers; and, health education on MCH and FP
(2)	to brigade health stations	MCH-FP training of brigade staff, and consultation and health education on MCH and FP

Role in Patriotic Health Campaigns

(1) Health education for children (at kindergartens and nurseries), especially in paediatric hygiene

FINANCIAL INFORMATION

Income (from local government) . . .	¥ 15 000

Expenditures

Total	¥ 14 000
Salaries and bonuses	¥ 5 200
MCH materials	¥ 2 900
For welfare fund (for staff) . . .	¥ 700
Maintenance	¥ 2 600
Equipment	¥ 700
Administrative expenses	¥ 1 900

Material received from higher levels (not accounted as income)

Portable autoclave	3 sets
Surgical instrument table	1
Electric iron	1
Oxygentank (cylinder)	2

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IRS/PHC/WD/82.10

INTERREGIONAL SEMINAR ON PRIMARY HEALTH CARE
YEXIAN COUNTY, 13-26 June 1982

EPIDEMIC PREVENTION STATION YEXIAN COUNTY

(information as of 1981)

MAIN FUNCTIONS

(1) Epidemic surveys
(2) Surveillance of occupational hygiene, food hygiene and school sanitation
(3) Plan for immunization
(4) Professional guidance of Patriotic Health Campaigns
(5) Conduct of scientific research
(6) Health education
(7) Training

STAFF

Total	35
Physicians	10
Assistant physicians	15
Laboratory technicians	2
Assistant technicians	4
Other technical staff	2
General service staff	2

SERVICES PERFORMED

Service activities

(1) Plan for immunization
(2) Epidemic surveillance of communicable endemic (goiter) and parasitic diseases
(3) Investigation and surveillance of harmful elements in factories
(4) Health education, including information on food hygiene, school hygiene, etc.
(5) Professional guidance to lower levels

Training activities

(1) 13 courses for 365 health workers from communes and factories (2/3 days to 2 weeks' duration). The courses were on food hygiene, school hygiene, communicable diseases and endemic diseases, laboratory work, plan for immunization and others.
(2) Demonstrations on epidemic prevention
(3) Lectures in commune factories

Research activities

(1) Study of flies and mosquitoes
(2) Evaluation of methods of composting

SERVICES PERFORMED (continued)

Support activities

(1) To county hospital:	laboratory services; consultation in communicable diseases; and diagnosis of food and insecticide poisoning
(2) To commune health centres	epidemic investigation; plan for immunization; and prevention and treatment of communicable diseases
(3) To brigade health stations	guidance on epidemic prevention; and demonstration on and investigation of water quality

Role in Patriotic Health Campaigns

(1) elimination of 4 pests
(2) evaluation of insecticides
(3) improvement of water supply, night soils, etc.
(4) health education

FINANCIAL INFORMATION

Income (from local government) . . .	¥ 91 300

Expenditures

Total	¥ 91 300
Salaries and bonuses	¥ 25 000
Expenses for vaccinations, medicines, health education, etc.	¥ 46 000
For welfare fund (for staff) . . .	¥ 1 600
Administration	¥ 12 300
Maintenance	¥ 6 400

Material received from higher levels (not accounted as income)

1/10 000 analistic balance	1
Automatic polarimeter	1
Super thermostat water bath	1
BCG	9 500
Poliomyelitis	65 000
Purified diphtheria vaccine	21 000
DPT	31 000
Encephalitis B. vaccine	12 400
Typhoid	5 000

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Nowhere in the world has primary health care been put into practice on such a large scale as in China, and nowhere else has it been more clearly demonstrated that "health for all" is a practical possibility. To examine the Chinese system of health care at first hand and see what lessons might be drawn from it, an Inter-regional Seminar on Primary Health Care was recently held in Yexian County, Shandong Province, People's Republic of China. It was jointly organized by UNDP, UNICEF, the World Bank, and WHO, with the support of the Chinese Ministry of Public Health.

This report of the seminar considers four key issues: China's three-level health care network; the involvement of the people; health manpower development; and the financing of rural health care. Among the points stressed are China's tremendous political commitment to the task of improving the quality of life for its people, especially in rural areas; the close association of the health sector with every aspect of economic and social development; the contribution of concerted action by all sectors to the raising of health standards; the combination of western medicine with Chinese traditional medicine; and the step-by-step development of appropriate technology, an example being the emergence of the "barefoot doctor" as a key figure in the delivery of health care. Perhaps the most important factor in the development of China's health care system has been the active involvement of the people, who not only take part in mass health campaigns and the delivery of health care but also assume responsibility for the management of health activities at every level.

While each country differs from others in its historical, cultural, social, economic, and political background and circumstances, the health care system in China presents many useful points of reference for those seeking to develop primary health care in other settings.